VOLUME 2 • MARCH 1947 • NUMBER 3

3/20/47

Journal of the AMERICAN MEDICAL WOMEN'S ASSOCIATION

LIBRARY
BOSTON UNIVERSITY
SCHOOL OF MEDICINE

NEW YORK INFIRMARY NUMBER

The Element
of Planned Protection

Accumulating evidence indicates that "Enziflur"—calcium fluoride with vitamins C and D—may provide a valuable aid in the prevention of dental caries.

"Enziflur" Lozenges should be allowed to dissolve slowly in the mouth, thus bringing the surfaces of the teeth in contact with the fluorine-bearing saliva. One "Enziflur" Lozenge daily supplies the optimal dosage of calcium fluoride in combination with the minimum daily requirements of vitamins C and D.

Descriptive literature providing indications, dosages and contraindications available to physicians and dentists upon request.

"Enziflur" Lozenges (No. 805) are available in bottles of 30 and 100.

"ENZIFLUR" *Lozenges*

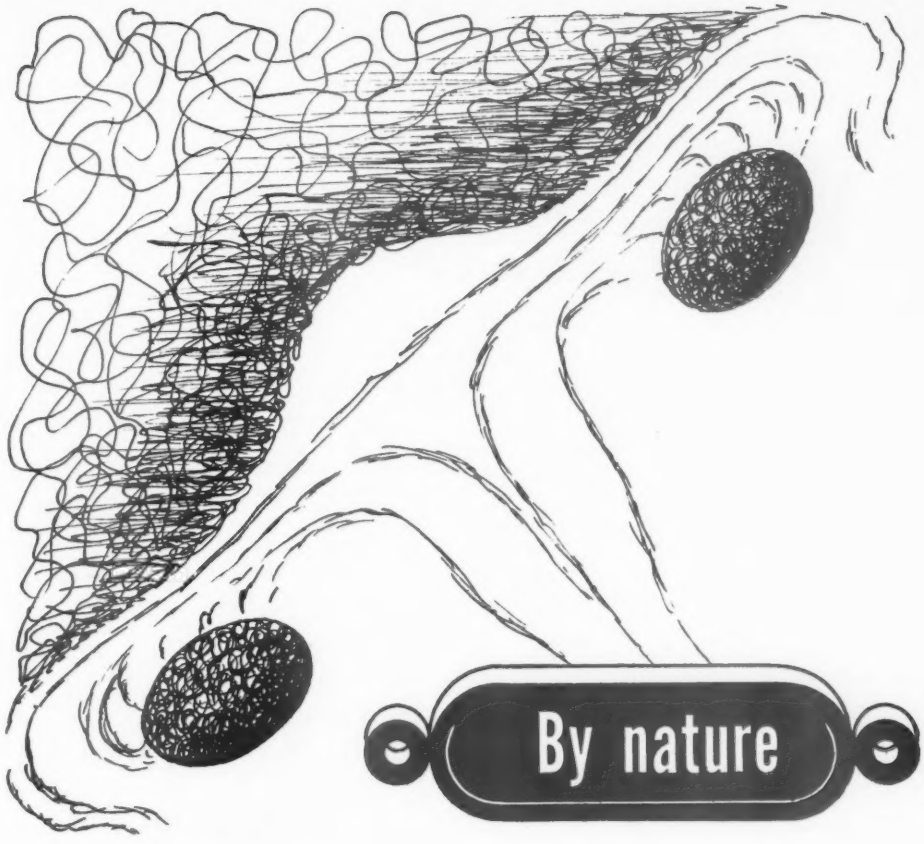
REG. U. S. PAT. OFF.

AS AN AID IN THE PREVENTION OF DENTAL CARIES.

AYERST, McKENNA & HARRISON Limited

22 EAST 40TH STREET, NEW YORK 16, N.Y.

Ayerst



Nature's own model of a balanced estrogenic hormone remains unique. For no laboratory can capture the infinitely delicate balance of physiologic potency, duration of effect, and tolerability which characterizes the natural estrogenic complex.

URESTRIN* contains original, natural estrogens apparently designed by nature to sustain the woman in a moment of great need—the menopause.

*Trademark, Reg. U. S. Pat. Off.

Upjohn
KALAMAZOO 99 MICHIGAN

FINE PHARMACEUTICALS SINCE 1886

Urestrin

Urestrin provides simplicity and convenience in estrogen therapy. It is available in capsules of 1,000 and 2,000, 4,000 and 10,000 International units in bottles of 30 and 100; and an elixir which supplies 2,000 International units per teaspoonful in 4 ounce and pint bottles.

WORTH REMEMBERING!

An investment in Picker X-ray equipment is an investment in consistently high performance over an exceptionally long life.

"It's all of seven years now since I bought this Picker Century . . . a 100 MA self-rectified job. It has served me well. But my practice, naturally, has grown over the years; so I'd been thinking of trading-in for a more powerful 200 MA set-up.

Then, one day, my Picker man came in with a great idea . . . a plan for converting my Century to full-wave operation, boosting it to 200 MA. Not trying to sell me a *new* machine, mind you, but making my *old* one "grow with me," so to speak. Of course I jumped at the idea; who wouldn't? Now I've got the 200 MA power I wanted . . . and all my old Century's flexibility and convenience to boot. I'm *twice* as well off as I was seven years ago."

my old Century's twice as powerful today as it was seven years ago . . .

PICKER X-RAY CORPORATION
300 Fourth Avenue, New York 10, N. Y.
Waite M'f'g Division, Cleveland, Ohio

PICKER Century full-wave conversion plan

Journal of the AMERICAN MEDICAL WOMEN'S ASSOCIATION

Each member of the American Medical Women's Association is entitled to receive a copy of the Journal of the American Medical Women's Association every month.

VOLUME 2 MARCH 1947 NUMBER 3

EDITORIAL

Foreword, *Ada Chree Reid, M.D.* 81
The New York Infirmary, *Elise S. L'Esperance, M.D.* 81

ORIGINAL ARTICLES

Intra-Uterine Irradiation: A Modification of the Radiumhemmet Packing Method, *Martha Elizabeth Howe, M.D., F.A.C.S.* and *Mary A. Jennings, M.D., F.A.C.S.* 83
Reading Disabilities in Children, *Ruth Morris Bakwin, M.D.* 89
The Significance of the Rh Factor in Obstetrics, *Irja Elizabeth Widenius, M.D.* 92
Pyribenzamine: Report on Two Clinical Experiments, *Leoni Neumann Claman, M.D.* 93
The Transplantability of Autologous Mammary Tissue in the Albino Mouse, *Frances H. Bogatko, M.D.* 96
The Blood Clotting Mechanism: a Review. Part I, *Audrie Leah Bobb, M.D.* 103
Importance of Co-operation between Physician and Dentist, *Anna P. Boudin, D.D.S.* 107
Child Guidance and Mother Guidance, *Selina Schryver, M.D.* . . . 108
The Treatment of Clubfeet, M. D., *Isabel Bittinger, M.D.* 109
Symposium on Recent Advances in Therapy, *Prepared by The Attending Staff of The New York Infirmary and Edited by Leonora Andersen, M.D.* 111
Case Reports, *By the Resident Staff of The New York Infirmary* . . . 119

FEATURES

Current Publications of Women in Medicine and in Allied Fields . . 126
Book Reviews 133
Elizabeth Blackwell: The First Woman Doctor, *Rachel Baker* 136
The Infirmary Tradition—Past, Present and Future 138
A Medical Calendar for March, *Alice Bartlett* and *Carroll L. Birch* . 142
International News and Interviews 145
Opportunities for Medical Women, *H. E. Thelander, M.D.* 150
News of Medical Women, *Elizabeth Kittredge, M.D.* 157

ORGANIZATION

President's Page, *Helen Johnston, M.D.* 153
Association Announcements 154

Official monthly magazine of the American Medical Women's Association, Incorporated. Address all communications regarding subscriptions, advertising and change of address to Journal of the American Medical Women's Association, Apt. 406-3300 West End Avenue, Nashville 5, Tennessee.

JOURNAL OF THE AMERICAN MEDICAL WOMEN'S ASSOCIATION is published monthly by the American Medical Women's Association, Inc. Entered as second class matter at the Post Office at Nashville, Tennessee, under the Act of August 24, 1912. Acceptance for mailing at special rates of postage provided for in Section 1102, Act of October 8, 1917, and authorized July 15, 1918.

Copyright 1947 by the American Medical Women's Association, Inc.

Subscription price, $3.00 per year; 35c single copy.

JOURNAL OF THE AMERICAN MEDICAL WOMEN'S ASSOCIATION

Editorial Board

JANET K. AITKEN, M.D., F.R.C.P. . . . . *London, England*
INÉS L.C. DE ALLENDE, M.D. . . . . *Cordoba, Argentina*
LEONA BAUMGARTNER, M.D. . . . . *New York, N. Y.*
CARROLL LAFLEUR BIRCH, M.D. . . . . *Chicago, Ill.*
NINA FAY CALHOUN, M.D. . . . . *Dallas, Texas*
MARY M. CRAWFORD, M.D. . . . . *New York, N. Y.*
BEULAH CUSHMAN, M.D. . . . . *Chicago, Ill.*
MARIA PAUMGARTTEN DEANE, M.D. . . . . *Belem, Pará, Brazil*
GLADYS H. DICK, M.D. . . . . *Chicago, Ill.*
DELLA GAY DRIPS, M.D. . . . . *Rochester, Minn.*
FAITH S. FETTERMAN, M.D. . . . . *Philadelphia, Pa.*
RITA S. FINKLER, M.D. . . . . *Newark, N. J.*
GRACE A. GOLDSMITH, M.D. . . . . *New Orleans, La.*
EDNA M. GUEST, O.B.E., M.D. . . . . *Toronto, Canada*
ANNA HUBERT, M.D. . . . . *New York, N. Y.*
HELEN JOHNSTON, M.D. . . . . *Des Moines, Iowa*
ZOE ALLISON JOHNSTON, M.D. . . . . *Pittsburgh, Pa.*
MARGARET H. JONES, M.D. . . . . *Los Angeles, Calif.*
JOSEPHINE H. KENYON, M.D. . . . . *New York, N. Y.*
ELIZABETH KITTREDGE, M.D. . . . . *Washington, D. C.*
LEILA C. KNOX, M.D. . . . . *New York, N. Y.*
IRENE A. KOENEKE, M.D. . . . . *Halstead, Kansas*
ESTHER P. LOVEJOY, M.D. . . . . *New York, N. Y.*
CATHARINE MACFARLANE, M.D. . . . . *Philadelphia, Pa.*
HELEN MACMURCHY, C.B.E., M.D. . . . . *Toronto, Canada*
MINNIE LEE MAFFETT, M.D. . . . . *Dallas, Texas*
DAME A. LOUISE MCILROY, O.B.E., M.D. . . . *London, England*
HARRIET C. MCINTOSH, M.D. . . . . *New York, N. Y.*
ANITA M. MUHL, M.D. . . . . *San Diego, Calif.*
DOROTHY KLENKE NASH, M.D. . . . . *Pittsburgh, Pa.*
LOUISE PEARCE, M.D. . . . . *Princeton, N. J.*
GILDA PERAZA, M.D. . . . . *Havana, Cuba*
ELLEN C. POTTER, M.D. . . . . *Trenton, N. J.*
BARBARA B. STIMSON, M. D. . . . . *New York, N. Y.*
MARGARET C. TOD, F.R.C.S.E., F.F.R. . . . *Manchester, England*
EDNA H. TOMPKINS, M.D. . . . . *New Haven, Conn.*
RUTH WELLS, M.D. . . . . *Pasadena, Calif.*
PRISCILLA WHITE, M.D. . . . . *Boston, Mass.*
KATE SAVAGE ZERFOSS, M.D. . . . . *Nashville, Tenn.*

Specialists

Anesthesia . . . . LOIS L. WELLS, M.D., *Oklahoma City, Okla.*
Gynecology . . . . . ELOISE PARSONS, M.D., *Chicago, Ill.*
Medicine . . MARION N. GIBBONS, M.D., *Shaker Heights, Ohio*
Obstetrics . . . . ISABEL KNOWLTON, M.D., *New York, N. Y.*
Orthopedic Surgery . . . RUTH JACKSON, M.D., *Dallas, Texas*
Pathology . . . . . SOPHIE SPITZ, M.D., *New York, N. Y.*
Pediatrics . . . . MAY BORQUIST GUY, M.D., *Seattle, Wash.*
Psychiatry . . . . . JOAN FLEMING, M.D., *Chicago, Ill.*
Public Health . . HELEN M. WALLACE, M.D., *New York, N. Y.*
Radiology . . HARRIET C. MCINTOSH, M.D., *New York, N. Y.*
Surgery . MARGARET STANLEY-BROWN, M.D., *New York, N. Y.*

EDITOR

ELISE S. L'ESPERANCE, M.D.
Two East 61st Street
New York 21, N. Y.

ASSISTANT EDITOR

ADA CHREE REID, M.D.
One Madison Avenue
New York 10, N. Y.

ASSISTANT EDITOR

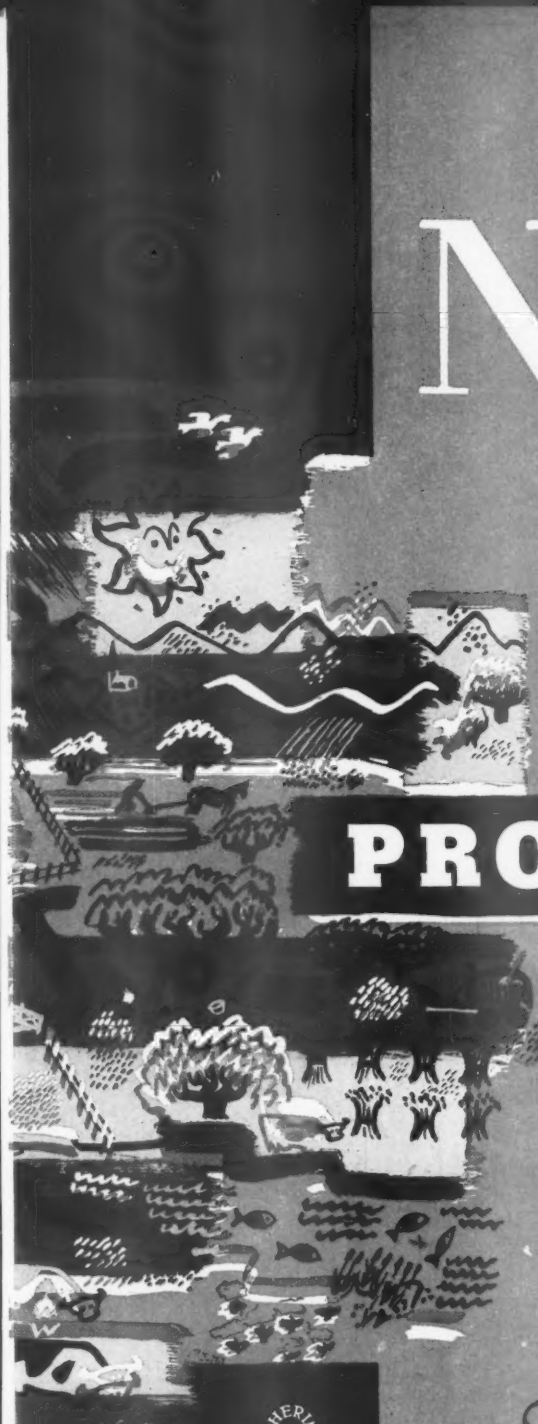
DOROTHY WELLS ATKINSON, M.D.
490 Post Street
San Francisco 2, California

COMMITTEE ON PUBLICATION

Chairman
HELEN F. SCHRACK, M.D.
216 North Fifth St.
Camden, N. J.

ADVERTISING AND BUSINESS MANAGER

MRS. FRANCES MERCER
Apt. 406
3300 West End Avenue
Nashville 5, Tennessee



Nature herself asks for nothing more

It would seem wise to assist nature with an endocrine substance similar to her own whenever diminishing production of hormone by the ovary causes menopausal symptoms. It would seem wise, therefore, to supply estradiol in the same smooth, steady fashion to which the body is accustomed.

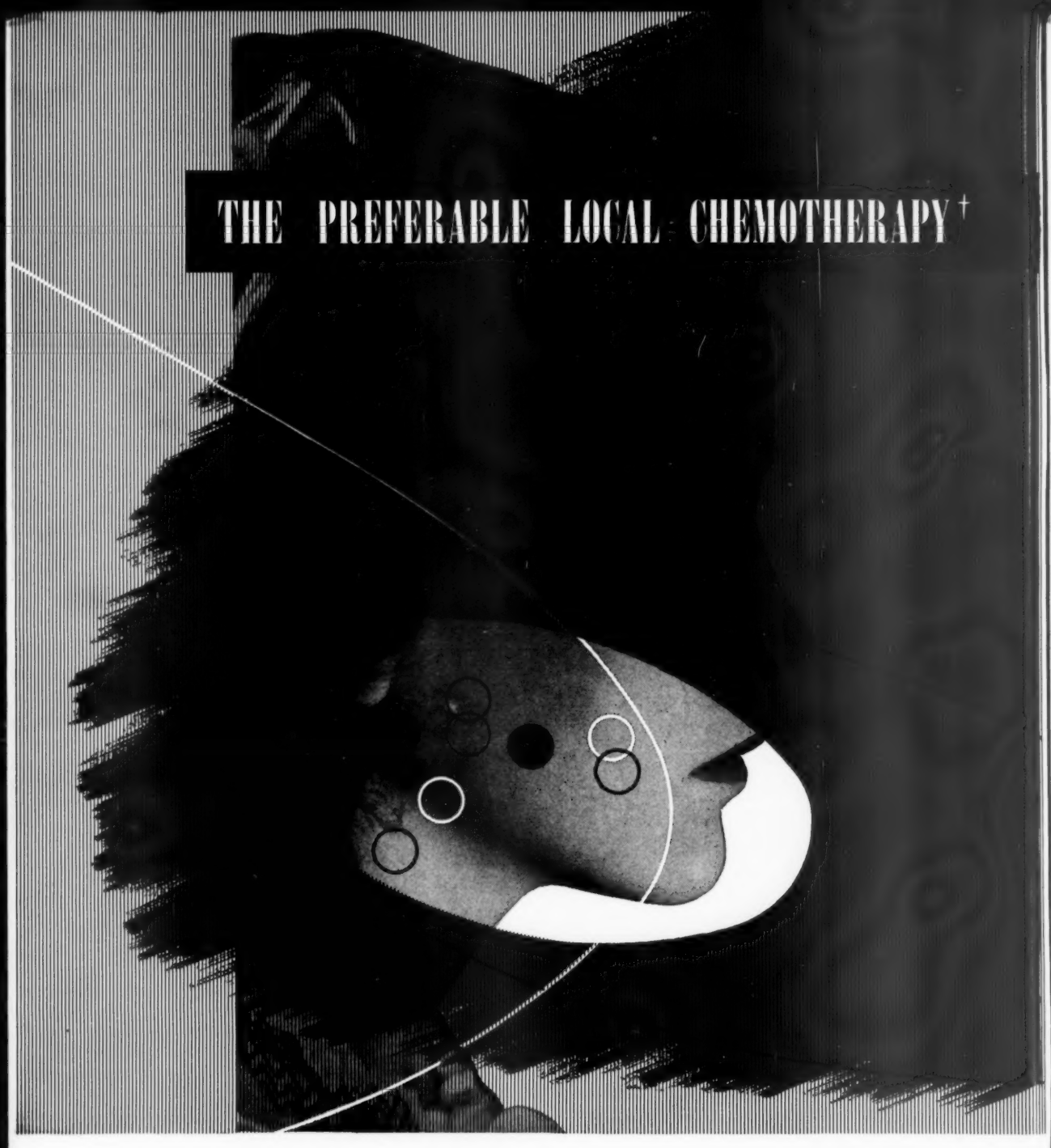
PROGYNON-B

PROGYNON-B, the benzoic acid ester of estradiol, parallels nature's own wisdom. Injected intramuscularly, the primary follicular hormone is released gradually and evenly from PROGYNON-B over a prolonged period—six to ten days depending on the amount administered.

PROGYNON-B (alpha-estradiol benzoate) in oil, ampules of 1 cc. containing 0.08, 0.16, 0.33, 1.0 and 1.66 mg. (500, 1000, 2000, 6000 and 10,000 R.U.); boxes of 3, 5, 6, 50 and 100 ampules; and in vials of 10 cc., each cc. containing 0.16 mg. (1000 R.U.) . . . 1 R.U. = 10 I.U. Boxes of 1 and 6 vials.

Trade-Mark PROGYNON-B—Reg. U.S. Pat. Off.

Schering CORPORATION · BLOOMFIELD, N. J.
IN CANADA, SCHERING CORP. LTD., MONTREAL



*A PRODUCT OF

White LABORATORIES, Inc. Pharmaceutical Manufacturers, Newark 7, N. J.

in oropharyngeal infections

HIGH LOCAL CONCENTRATION

Prompt and long-sustained in effect; the sulfonamide is maintained in intimate, therapeutically effective concentration throughout entire oropharyngeal area.

NEGLIGIBLE SYSTEMIC ABSORPTION

Even in maximal dosage, systemic absorption is negligible; therefore likelihood of toxic reactions is virtually obviated.

STABLE

Full potency is retained under all conditions.

CLINICALLY ACCEPTED

Established by long and extensive clinical use.

Supplied in packages of 24 tablets, sanitaped, in slip-sleeve prescription boxes.

IMPORTANT: Please note that your patient requires your prescription to obtain this product from the pharmacist.

†Fox, N. et al.: Arch. Otolaryng., *41*:279 (1945).

* White's

*Sulfathiazole gum

AMERICAN MEDICAL WOMEN'S ASSOCIATION

1946-1947

Annual Meeting: Atlantic City, N. J., June 7-8, 1947

OFFICERS

President
HELEN JOHNSTON, M.D.
1314 Equitable Bldg., Des Moines 9, Iowa.

President-Elect
BEULAH CUSHMAN, M.D.
25 E. Washington St., Chicago 2, Ill.

Retiring President
KATE SAVAGE ZERFOSS, M.D.
165 Eighth Ave., N., Nashville 3, Tenn.

First Vice-President
MABEL E. GARDNER, M.D.
129 South Main St., Middletown, Ohio.

Second Vice-President
HILLA SHERIFF, M.D.
State Department of Health, Columbia, S. C.

Third Vice-President
BERENICE STONE, M.D.
3668 Pershing Drive, San Diego, Calif.

Secretary
HELEN F. SCHRACK, M.D.
216 N. Fifth St., Camden, N. J.

Treasurer
MARY RIGGS NOBLE, M.D.
Bowmansdale, Cumberland County, Pa.

Editor of JOURNAL
ELISE S. L'ESPERANCE, M.D.
Two East 61st St., New York 21, N. Y.

Business Manager of JOURNAL
FRANCES S. MERCER
Apt. 406, 3300 West End Ave., Nashville 5, Tenn.

REGIONAL DIRECTORS

New England

North Atlantic
DOROTHY M. ROGERS, M.D.
50 Cooper St., Woodbury, N. J.

Middle Atlantic
H. GLADYS KAIN, M.D.
1801 Eye St., N.W., Washington 6, D. C.

South Atlantic
AMEY CHAPPELL, M.D.
11 Seventeenth St., N.E., Atlanta, Ga.

Northeast Central
FAITH W. REED, M.D.
2327 Caterbury Road, University Heights,
Cleveland, Ohio.

Southeast Central
RUTH G. ALEMAN, M.D.
2329 S. Carrollton Ave., New Orleans 18, La.

Northwest Central
JEAN JONGEWAARD, M.D.
Jefferson, Iowa.

Southwest Central
CORA DYCK, M.D.
Moundridge, Kansas

North West
MABEL M. AKIN, M.D.
Medical Arts Bldg., Portland 5, Ore.

South West
ANITA GELBER, M.D.
1052 West Sixth St., Los Angeles, Calif.

CHAIRMEN OF STANDING COMMITTEES

American Women's Hospitals
ESTHER P. LOVEJOY, M.D.
50 W. 50th St., New York, N. Y.

Auditing
HELEN E. MAYTUM, *M.D.*
910 Metropolitan Bldg., Denver, Colo.

Emergency Aid for Women Physicians
RITA S. FINKLER, M.D.
35 Leslie St., Newark 8, N. J.

Executive
HELEN JOHNSTON, M.D.
1314 Equitable Bldg., Des Moines 9, Iowa.

Finance
ADA CHREE REID, M.D.
I Madison Ave., New York 10, N. Y.

History of Medicine
ELIZABETH MASON-HOHL, M.D.
671 N. Mariposa Ave., Los Angeles 4, Calif.

International Relations
KATE SAVAGE ZERFOSS, M.D.
165 8th Ave. N., Nashville, Tenn.

Legislation
MARGARET NICHOLSON, M.D.
1801 Eye St., N.W., Washington 6, D. C.

Library
BERTHA VAN HOOSEN, M.D.
25 E. Washington St., Chicago 2, Ill.

Nominations
MARY MARGARET FRAZER, M.D.
76 W. Adams St., Detroit, Mich.

Opportunities for Medical Women
H. E.THELANDER, M.D.
384 Post St., San Francisco 8, Calif.

Organization and Membership
ZOE ALLISON JOHNSTON, M.D.
601 Jenkins Bldg., Pittsburgh 22, Pa.

Publication Committee
HELEN F. SCHRACK, M.D.
216 N. Fifth St., Camden, N. J.

Public Health
CARROLL LAFLEUR BIRCH, M.D.
1853 W. Polk St., Chicago, Ill.

Publicity
RUTH EWING, M.D.
50 East Tenth St., New York 3, N. Y.

Resolutions
EVA F. DODGE, M.D.
Univ. of Arkansas School of Medicine,
Little Rock, Ark.

Scholarship Awards
FRANCES HANNETT, M.D.
5490 So. Shore Drive, Chicago 15, Ill.

Scholarship Funds
IRENE A. KOENEKE, M.D.
Halstead, Kansas

Woman's Medical College of Pennsylvania
CATHARINE MACFARLANE, M.D.
701 Medical Arts Bldg., Philadelphia, Pa.

CHAIRMEN OF SPECIAL COMMITTEES

Annual Meeting
CARYE BELLE HENLE, M.D.
31 Lincoln Park, Newark, N. J.

Constitution and By-Laws
MARY RIGGS NOBLE, M.D.
Bowmansdale, Cumberland County, Pa.

SYMBOLS OF SIGNIFICANCE

Thrombin Topical

(Bovine Origin)

"Hemostat, please . . . Thrombin."

Bleeding controlled, the operation proceeds. **THROMBIN TOPICAL,** highly potent, rapidly acting hemostatic of biologic origin, is a distinct achievement for safer surgery—minor and major. Capillary hemorrhage may be arrested seconds after local application of **THROMBIN TOPICAL.** Unending research in all the branches of medicine has led to the development of new Parke-Davis products, physiologically sound and clinically valuable. It has maintained as a continuing symbol of therapeutic significance the mark of Parke-Davis—

MEDICAMENTA VERA.

THROMBIN TOPICAL is available in 5,000-unit ampoules, each packed with a 5 cc. ampoule of sterile, isotonic saline diluent.

PARKE, DAVIS & COMPANY • DETROIT 32, MICHIGAN

MEDICAMENTA VERA

AMERICAN MEDICAL WOMEN'S ASSOCIATION
1946-1947 BRANCH OFFICERS

ONE, WASHINGTON, D. C.

President: Grace G. Purse, M.D., 1801 Eye St., N.W.,
Recording Secretary: Paula Kaiser, M.D., 2407 15th St., N.W.
Corresponding Secretary: Cecile Fusfeld, M.D., 2026 R St., N.W.
Treasurer: Elizabeth Kahler, M.D., 1901 Wyoming Ave., N.W.

TWO, CHICAGO, ILLINOIS

President: Evangeline Stenhouse, M.D., 55 E. Washington St.
President-Elect: Luella Nadelhoffer, M.D., 6 N. Michigan Ave.
First Vice-President: Katharine Wright, M.D., 811 Lincoln St., Evanston, Illinois.
Second Vice-President: Florence Meador Rees, M.D., 31 N. State St.
Secretary: Joan Fleming, M.D., 8 S. Michigan Ave.
Treasurer: Ethel Davis, M.D., 4742 Ellis Ave., Hyde Park Station.
Editor of Bulletin: Beulah Cushman, M.D., 25 E. Washington St.

THREE, MARYLAND

President: Amelia E. Link, M.D., 2211 E. Lake Ave., Baltimore 3.
Secretary: Lucille Caldwell, M.D., Wyman Park Apts., Baltimore.
Treasurer: Eleanor Scott, M.D., 5600 Pimlico Rd., Baltimore 9.

FOUR, NEW JERSEY

President: Elisabeth B. Ward, M.D., 555 William St., East Orange.
First Vice-President: Elizabeth R. Brackett, M.D., 371 Franklin Ave., Nutley.
Second Vice-President: Ellen C. Potter, M.D., Glen Cairn Arms, Trenton.
Third Vice-President: Dorothy L. Frame, M.D., 15 Highland Ave., Glen Ridge.
Corresponding Secretary: Gladys C. Winter, M.D., Norma Court, Teaneck.
Recording Secretary: Virginia Wuerthele, M.D., 560 Mt. Prospect Ave., Newark.
Treasurer: Margaret M. Wurts, M.D., 27 E. Wellesley Rd., Montclair.

FIVE, PORTLAND, OREGON

President: Miriam Luten, M.D., 105 N.E. 61st St., Apt. 10.
Secretary: Laura Ladd, M.D., Medical Arts Bldg.
Treasurer: Dorothy Vinton, M.D., 680 Medical Arts Bldg.

SIX, OMAHA, NEBRASKA

President: Christine Erickson-Hill, M.D., 532 First Ave., Council Bluffs, Iowa.
Secretary-Treasurer: Dorothy Thompson, M.D., 1234 Medical Arts Building, Omaha, Nebraska.

SEVEN, THE CAROLINAS

President: Anna M. Gove, M.D., 517 Highland Avenue, Greensboro, N. C.

EIGHT, NEW ORLEANS

President: Elizabeth Bass, M.D., 200 Carondelet St.
Secretary-Treasurer: Georgiana von Langermann, M.D., 1430 Tulane Ave.
Chairman of Program Committee: Anna Danneman Colomb, M.D., 1421 Napoleon Ave.

NINE, CONNECTICUT

President: Margaret Tyler, M.D., 158 Whitney Ave., New Haven 11.
Vice-President: Edith Jackson, M.D., New Haven Hospital, New Haven.
Secretary-Treasurer: Louise de Schwenitz, M.D., 68 Bedford Ave., Hamden 14.

TEN, WISCONSIN

President: Nina T. Mueller, M.D., 2946 N. Cambridge Ave., Milwaukee 11.
Vice-President: May Neville Bielefeld, M.D., 2809 N. 56th St., Milwaukee.
Secretary-Treasurer: Mary Broadbent, M.D., 1018 N. Jefferson St., Milwaukee.

ELEVEN, SOUTHWESTERN OHIO

President: Henrietta Marie Miller, M.D., 3858 Drake Ave., Cincinnati 9.
Secretary: Helena T. Ratterman, M.D., 126 Wm. H. Taft Road, Cincinnati.

TWELVE, COLUMBUS, OHIO

President: Frances Harding, M.D., 433 E. Granville Road, Worthington, Ohio
Secretary: Edna F. Patterson, M.D., 2483 E. Main St., Columbus, Ohio.

THIRTEEN, SAN DIEGO

President: Berenice Stone, M.D., 3668 Pershing Drive, San Diego.
Vice-President and Program Chairman: Cornelia Robertson, M.D., 1203 Bank of America, 625 Broadway, San Diego 1.
Secretary-Treasurer: Antoinette Le Marquis, M.D., Medico-Dental Bldg., 233 A St., San Diego.

FOURTEEN, NEW YORK CITY

President: Elaine Ralli, M.D., 138 East 36th St.

AMERICAN MEDICAL WOMEN'S ASSOCIATION
1946-1947 BRANCH OFFICERS (continued)

First Vice-President: Adelaide Romaine, M.D., 35 West Ninth St.
Second Vice-President: Mary Jennings, M.D., 901 Lexington Ave.
Secretary: Leoni Neumann Claman, M.D., 40 East 88th St.
Treasurer: Georgia Reid, M.D., 10 West 95th St.

FIFTEEN, CLEVELAND

President: Linda Tischer Schneider, M.D., 3494 Lee Road, Shaker Heights 20, Ohio.
Vice-President: Helena Hoelscher, M.D.
Secretary: Rose M. Petti, M.D., 16374 Euclid Ave., East Cleveland.
Treasurer: Chassia G. Levin, M.D., 3482 E. 150th St., Cleveland.

SIXTEEN, PITTSBURGH

President: Dorothy K. Nash, M.D., 4136 Bigelow Blvd., Pittsburgh 13.
Vice-President: Rebecca McConnel, M.D., 1010 Professional Bldg., Pittsburgh.
Secretary-Treasurer: Irene D. Ferguson, M.D., 1213 Denniston Ave., Pittsburgh.
Recording Secretary: Theodora P. Dakin, M.D., 4925 Friendship Ave., Pittsburgh.
Censors: Pauline M. Kirk, M.D., (Three years), State Hospital, Woodville, Penna.; Alice S. Gularski, M.D., (Two years), Jenkins Arcade, Pittsburgh 22; Reuben G. Alley, M.D., (One year), West Penn Hosp., Pittsburgh.

SEVENTEEN, ILLINOIS

President: Nettie Dorris, M.D., Paris, Illinois.
Secretary-Treasurer: Susan A. Slakis, M.D., 861 So. State St., Lincoln, Illinois.

EIGHTEEN, UPPER NEW YORK

Secretary: Louise Beamis Hood, M.D., 153 Bidwell Parkway, Buffalo.
Treasurer: Marguerite P. McCarthy-Brough, M.D., 1811 West Genessee St., Syracuse.

NINETEEN, IOWA STATE

President: Jean Jongewaard, M.D., Jefferson, Iowa.
President-Elect: Nelle T. Schultz, M.D., 106 N. Taft St., Humboldt, Iowa.
Secretary: Grace Sawyer, M.D., The Meadows, Woodward, Iowa.
Treasurer: Edna Sexsmith, M.D., Greenfield, Iowa.

TWENTY, BLACKWELL

President: Esther Dale, M.D., 4850 Three Mile Drive, Detroit 24, Michigan.
President-Elect: Gertrude Mitchell, M.D., 650 West Bethume, Detroit 2, Michigan.
Secretary: Thelma Wygant, M.D., 935 S. Military Ave., Dearborn, Mich.
Treasurer: Delma F. Thomas, M.D., 753 Fisher Bldg., Detroit 2, Mich.

TWENTY-ONE, COLORADO STATE

President: Elsie Seelye Pratt, M.D., 737 Republic Building, Denver.
Secretary: Edna M. Reynolds, M.D., 227 16th St., Denver.

TWENTY-TWO, ST. LOUIS

President: Emmy Ross Boeckelman, M.D.
Secretary-Treasurer: Bernice Torin, M.D., 6983 Cornell Ave., St. Louis.

TWENTY-THREE, LOS ANGELES DISTRICT

President: Olga McNeile, M.D., 1401 S. Hope St., Los Angeles.
Vice-President: Vera Waegle, M.D., 4405 West 10th St., Los Angeles 6.
Recording Secretary: V. Ceile Chavannes, M.D., 3809½ Main St., Culver City, Calif.
Corresponding Secretary: Gertrude C. Seabolt, M.D., 803 Grand Ave., South Pasadena.
Program Chairman: Anita Gelber, M.D., 1052 West Sixth St., Los Angeles.

TWENTY-FOUR, KANSAS

President: M. Townsend Glassen, M.D., Phillipsburg.
Secretary-Treasurer: Ruth Spiegel, M.D., Formosa.

TWENTY-FIVE, PHILADELPHIA

President: Frieda Baumann, M.D., 1930 Chestnut Street, Philadelphia, Penna.
Vice-President: Dorothy Ashton, M.D., 1930 Chestnut Street, Philadelphia, Penna.
Secretary: Dora Ruland, M.D., 6445 Greene Street, Philadelphia, Penna.
Treasurer: Jean Crump, M.D., 1930 Chestnut Street, Philadelphia, Penna.

TWENTY-SIX, MINNESOTA

President: Marie Katherine Bepko, M.D., Cloquet.
Vice-President: Bernice Thoreson, M.D., 203 N. Concord St., South St. Paul.
Secretary: Hilda H. Luck, M.D., 531 N. Fourth St., Mankato.

TWENTY-SEVEN, OKLAHOMA

President: Eleanora Schmidt, M.D., 302 Park Drive, Norman.
Secretary-Treasurer: Iva Merritt, M.D., 650 Lindsay Road, Norman.

TWENTY-EIGHT, SPOKANE

TWENTY-NINE, ATLANTA

President: Elizabeth Martin, M.D., 756 Cypree St., N.E., Atlanta.
Vice-President: Jane Williams, M.D., 768 Juniper St., N.E., Atlanta.
Recording Secretary-Treasurer: Margaret V. Burns, M.D., Agnes Scott College, Decatur, Ga.
Corresponding Secretary: Estelle Boynton, M.D., 26 Linden Ave., N.E., Atlanta.

THIRTY, UPPER CALIFORNIA

President: Helen B. Weyrauch, M.D., 516 Sutter St., San Francisco 2.
Treasurer: Elise M. Rose, M.D., 384 Post St., San Francisco.
Secretary: Grace Talbot, M.D., 909 Hyde St., San Francisco.

THIRTY-ONE, MISSISSIPPI

President: Virginia Howard, M.D., Hotel Edwards, Jackson, Miss.
Vice-President: Agnes Carr Thorpe, M.D., Jackson, Miss.
Secretary: Virginia Small Lueckenbach, M.D., Greenville, Miss.

AMERICAN MEDICAL WOMEN'S ASSOCIATION

Committee Personnel

Northeast Central Region: Faith W. Reed, M.D., Regional Director, 2327 Canterbury Road, Univ. Heights, Cleveland, Ohio; Ruth H. St. John, M.D., Room 707, 150 E. Broad St., Columbus 15, Ohio; Luella E. Nadelhoffer, M.D., 6 N. Michigan Ave., Chicago, Illinois; Thelma Wygant, M.D., 935 S. Military Ave., Dearborn, Michigan.

South Atlantic Region: Amey Chappell, M.D., Regional Director, 11 Seventeenth St., N.E., Atlanta, Ga.; Irma Henderson-Smathers, M.D., Vice-Chairman, Medical Bldg., Asheville, N. C.; Augusta E. Willis, M.D., Tri-County Hospital, Orangeburg, S. C.; Cordelia K. Dowman, M.D., 3162 Peachtree Drive, N.E., Atlanta, Ga.; Ella M. Enlows, M.D., 450 North Victoria Park Road, Fort Lauderdale, Fla.

STANDING COMMITTEES

Auditing Committee: Helen E. Maytum, M.D., Chairman, 910 Metropolitan Bldg., Denver, Colo.; Eva T. Brodkin, M.D., 365 Osborne Terrace, Newark 8, N. J.; Mary H. Easby, M.D., 1930 Chestnut St., Philadelphia 3, Penna.

Emergency Aid for Women Physicians: Rita S. Finkler, M.D., Chairman, 35 Leslie Street, Newark 8, N. J.; Lydia B. Hauck, M.D., Vice-Chairman, 644 Stuyvesant Ave., Irvington, N. J.; Rose D. Bass, M.D., 54 Lyons Ave., Newark, N. J.; Eva T. Brodkin, M.D., 365 Osborne Terrace, Newark, N. J.; Carye-Belle Henle, M.D., 31 Lincoln Park, Newark, N. J.; Selma Weiss, M.D., 2 Stratford Place, Newark, N. J.; Berta Drapkin, M.D., 31 Lincoln Park, Newark, N. J.; Zelda Marks, M.D., 95 Wilson Ave., Newark, N. J.; Gertrude Oberlander, M.D., 866 S. 13th St., Newark, N. J.

Nominating Committee: Mary Margaret Frazer, M.D., Chairman, 76 West Adams St., Detroit, Mich.; Dora F. Sonnenday, M.D., 145 W. McMillan St., Cincinnati 19, Ohio; Ella M. Enlows, M.D., 450 North Victoria Park Road, Fort Lauderdale, Fla.; Judith Ahlem, M.D., Livermore Sanitorium, 954 S.L. St., Livermore, Calif.; Alice E. S. Gularski, M.D., Jenkins Arcade, Pittsburgh 22, Pa. **Alternate:** Bessie May Beach, M.D., Columbus, Ga.

Opportunities for Medical Women: H. E. Thelander, M.D., Chairman, 384 Post St., San Francisco 8, Calif.; Bernice McCoy, M.D., Vice-Chairman, 526½ North Milton Ave., Whittier, Calif.; Ly Werner, M.D., 513 First National Bank Bldg., Albuquerque, N. Mex.; Theresa Scanlan, M.D., 133 East 58th St., New York 3, N. Y.; Florence I. Mahoney, M.D., The Pennsylvania State College, State College, Pa.

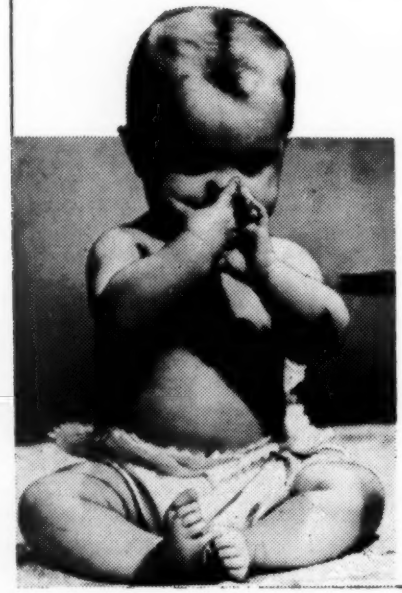
Public Health: Carroll LaFleur Birch, M.D., Chairman, 1853 West Polk St., Chicago, Illinois; Virginia Beyer, M.D., Vice-Chairman, Springfield State Hospital, Sykesville, Md.; Elsie Hartman,

(Continued on page xiv)

SP RAD 47-55 B FEB.

W·H·E·L·A·N·S

The "PICTURE OF HEALTH" . . . and for *Good Reasons*



Lively expression . . . glowing skin . . . firm muscles . . . the merriment that comes only from sound health! How did this little lady get them?

Of course, it is the proper food and care given to her . . . but the service rendered by the pharmacist, also, is an important contributory factor.

Scientific training has gone into his profession . . . to give assurance that he carries out doctors' orders skilfully . . . accurately. He works in an immaculately clean dispensary, employs up-to-date measuring and compounding equipment and uses only the highest quality pharmaceuticals.

Yes . . . the service given by the pharmacist is an important factor in a child's looking the "picture of health."

Whelan DRUG <Whelco> STORES

W·H·E·L·A·N·S

To the poet the night may have "a thousand eyes," but to a sleepless patient it has a thousand worries and fears. ● Whether sleeplessness is caused by outside disturbances or mental disquiet, your patient will appreciate the efficient sedation of Nembutal, by which sleep is encouraged—not forced. Usually he will not feel dull upon awakening, as the action of the drug in doses of ½ grain or ¾ grain ends within a few hours. ● These three qualities—gentle effectiveness, brief action and small dosage—make Nembutal one of the safest and most dependable of barbiturates. Try it on your next insomnia case. ABBOTT LABORATORIES, North Chicago, Illinois.

NEMBUTAL

REG. U. S. PAT. OFF.

[Sodium Ethyl(1-methylbutyl)barbiturate, Abbott]

AMERICAN MEDICAL WOMEN'S ASSOCIATION

Committee Personnel

(Continued from page xii)

M.D.; Virginia Pierce, M.D.; Dorothy Chess, M.D.

Publicity: Ruth Ewing, M.D., Chairman, 50 East Tenth St., New York 3, N. Y.; Leoni Claman, M.D., Vice-Chairman, 40 East 88th St., New York, N. Y.

Scholarship Awards: Frances Hannett, M.D., Chairman, 5490 South Shore Drive, Chicago 15, Illinois; Dorothy H. Heilman, M.D., Vice-Chairman, 715-10th Ave., S.W., Rochester, Minn.; Clara H. Pierce, M.D., 1482 S. State St., Syracuse, N. Y.; Mary Riggs Noble, M.D., Bowmansdale, Cumberland County, Pa.; Irene A. Koeneke, M.D., Halstead, Kans.; Lillian E. Shaw, M.D., 45 Field Point Road, Greenwich, Conn.

Scholarship Funds: Irene A. Koeneke, Chairman, Halstead, Kans.; Ruth Hargraves, M.D., Vice-Chairman, 1407 Medical Arts Bldg., Houston, Texas; Hilla Sheriff, M.D., State Dept. of Health, Columbia, S. C.; Ruth Montgomery Short, M.D., 1319 West 50th, Wichita, Kans.

SPECIAL COMMITTEES

Constitution and By-Laws: Mary Riggs Noble, M.D., Chairman, Bowmansdale, Cumberland County, Pa.; Ruth Ewing, M.D., 50 East 10th St., New York, N. Y.; Carroll LaFleur Birch, M.D., 1853 West Polk St., Chicago, Ill.; Beulah Cushman, M.D., 25 East Washington St., Chicago 2, Illinois

International Relations: Catharine Macfarlane, M.D., 701 Medical Arts Bldg., Philadelphia, Pa.; Carroll LaFleur Birch, M.D., 1853 West Polk St., Chicago, Ill.; Dorothy W. Atkinson, M.D., 490 Post St., San Francisco 2, Calif.

Publication Committee: Helen F. Schrack, M.D., Chairman, 216 North Fifth St., Camden, N. J.; Carroll LaFleur Birch, M.D., Vice-Chairman, 1853 West Polk St., Chicago, Illinois; Mary H. Easby, M.D., 1930 Chestnut St., Philadelphia 3, Pa.; Elizabeth Kittredge, M.D., 3906 McKinley Ave., N.W., Washington, D. C.; Elise S. L'Esperance, M.D., 2 East 61st St., New York, N. Y.; Catharine Macfarlane, M.D., 701 Medical Arts Bldg., Philadelphia, Pa.; Dorothy Morse, M.D., 450 Sutter St., San Francisco 8, Calif.; Mary Riggs Noble, M.D., Bowmansdale, Cumberland County, Pa.

. . . to relieve the strain of

CHRONIC IRREGULARITY

WHEN frequent aberrations of the menses suggest that normal function has overstepped the bounds of physiologic limits—the physician is often confronted with a condition which proves highly distressing to the patient.

For such cases (as in amenorrhea, dysmenorrhea, menorrhagia and metrorrhagia), many physicians rely on Ergoapiol (Smith) as the emmenagogue of choice. By its unique inclusion of all the alkaloids of ergot (prepared by hydro-alcoholic extraction), and synergized by the presence of apiol, oil of savin and aloin—Ergoapiol provides a balanced and sustained tonic action on the uterus, affording welcome relief in many functional catamenial disturbances. It produces a desirable hyperemia of the pelvic organs, and stimulates smooth, rhythmic uterine contractions. Ergoapiol also serves as an efficient hemostatic and oxytocic agent. Dosage: 1 to 2 capsules 3 to 4 times daily.

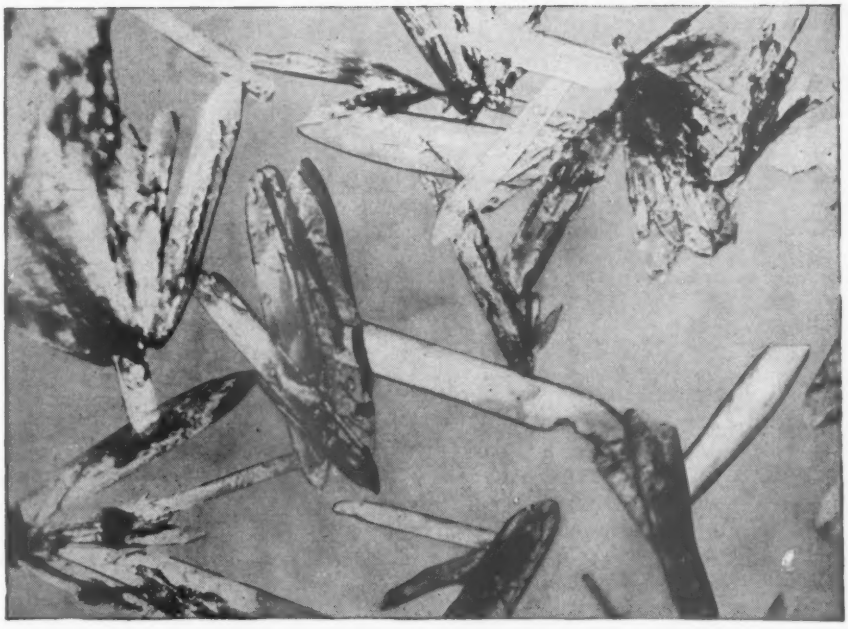
Write for your copy of the new 20-page brochure
"Menstrual Disorders—Their Significance and Symptomatic Treatment"

Ergoapiol is supplied in ethical packages of 20 capsules.

ERGOAPIOL

MARTIN H. SMITH COMPANY • 150 LAFAYETTE STREET, NEW YORK 13, N. Y.

Ethical protective mark, "MHS" visible when capsule is cut in half at seam.



Announcing Crystalline Penicillin G Sodium Merck

- ★ No refrigeration required for dry form.
- ★ Therapeutically inert materials which may act as allergens have been virtually eliminated.
- ★ Minimum irritation on injection as a result of removal of thesapeutically inert materials.
- ★ Meets exacting Government specifications for Crystalline Penicillin G.
- ★ Penicillin G has been proved to be a highly effective therapeutic agent.

CRYSTALLINE
PENICILLIN G SODIUM
MERCK

MERCK & CO., Inc. RAHWAY, N. J.

Manufacturing Chemists

MERCK MERCK

The Quick, Easy Way to Strain **FRESH** *Foods*

The Foley Food Mill conserves mother's time and energy in straining fresh vegetables and fruits. With just a few turns of the handle, the Foley Food Mill separates fibres and hulls, pureeing all cooked foods fine enough for the smallest baby or adult diet—peas, carrots, beets string beans, spinach, apple sauce, prunes. Made of steel, rust-and-acid resistant. Available through department and hardware stores. Retail price $1.50. Special offer to doctors. 1 Only $1.00 postpaid.

Foley Manufacturing Company
121-1 Second St. N.E., Minneapolis 13, Minn.

FOLEY FOOD MILL

SPECIAL NOTICE

Below is noted a list of the firms who at the present time are advertising in the JOURNAL OF THE AMERICAN MEDICAL WOMEN'S ASSOCIATION. We appreciate their interest in our publication and ask our members to favor them whenever possible.

Abbott Laboratories
Ayerst, McKenna & Harrison, Ltd.
Carnation Company
Foley Manufacturing Company
Lanteen Medical Laboratories, Inc.
Eli Lily & Company
Mead Johnson & Company
Merck & Company, Inc.
Ortho Pharmaceutical Corporation
Parke, Davis & Company
Picker X-Ray Corporation
Schering Corporation
Martin H. Smith Company
United Cigar-Whelan Stores Corporation
Upjohn Company
White Laboratories, Inc.

- **The Medical Profession DOES care** that adequate provision be made for its aged and retired colleagues.
- **The PHYSICIANS' HOME has faced** the challenge of fund raising for this worthy purpose.
- **You can help us reach** our long-desired goal of establishing an endowment fund by continuing to support our work with:
  1. A voluntary contribution
  2. A legacy in your will
  3. A war bond
- **It is a friendly gift that lives.**

PHYSICIANS' HOME
52 East 66th St., New York 21, N. Y.

ANNOUNCEMENTS FROM THE PHARMACEUTICAL FIRMS

THE SCHOOL-CHILD'S BREAKFAST

Many a child is scolded for dullness when he should be treated for undernourishment. In hundred of homes a "continental" breakfast of a roll and coffee is the rule. If, day after day, a child breaks the night's fast of twelve hours on this scant fare, small wonder that he is listless, nervous, or stupid at school. A happy solution to the problem is Pablum. Pablum furnishes protective factors especially needed by the school-child —especially calcium, iron and the vitamin B complex. The ease with which Pablum (or Pabena) can be prepared enlists the mother's cooperation in serving a nutritious breakfast. This palatable cereal requires no further cooking and can be prepared simply by adding milk or water of any desired temperature.

NEW PACKAGING FOR CEREVIM

Lederle Laboratories has just announced new packaging for its pre-cooked cereal food, CEREVIM. The familiar appearance of the pound and half-pound CEREVIM packages, standard in the druggist's stock, is preserved through the retention of basic styling. New crispness and definition of the blue and yellow Lederle colors is achieved through the use of a separate tight-wrapped printed label completely covering the sealed package.

CEREVIM's new packaging gives increased protection against moisture and provides added convenience and easier legibility for the consumer. For institutions and other large scale users of CEREVIM, a new bulk carton in the form of a 25-pound safety-sealed drum, is now being offered, which affords both greater convenience and economy in diet preparation.

ADVANCES IN SULFONAMIDE THERAPY SHOWN AT NEW YORK ACADEMY OF MEDICINE

Three new principles in sulfonamide therapy are stressed in the scientific exhibit recently installed at the New York Academy of Medicine, by Schering Corporation of Bloomfield and Union, New Jersey. Based on recent clinical publications appearing in the medical literature, these factors are used in three different products which materially enhance the effectiveness of sulfonamides against infections.

Damage in the kidney from precipitation of sulfonamide crystals is avoided when combined sulfonamides are used. A saturated aqueous or urinary solution of one sulfonamide can be saturated still further with a different sulfonamide, each drug behaving as though it were present alone and exerting no effect on the solubility of the other. Thus the full sulfonamide effect is obtained with a greatly lessened danger of crystalluria. This greater safety is obtained by using equal parts of sulfadiazine and sulfathiazole (as in Schering's Combisul-TD), with each drug present in exactly half the usual unit dosage.

The effectiveness of a new type of sulfonamide in the prevention and treatment of eye infections is also shown. Sodium Sulfacetimide Solution 30% has been used in the eye for its remarkable penetration into the tissues and therapeutic effect. This product depends upon the high concentration (30%) of drug which can be obtained at physiological pH., this sulfonamide being the only drug of the type showing this property. It is non-irritating.

High solubility in the urine and rapid excretion into the urine in high concentration are the features of Sulamyd, the sulfonamide effective against B. coli. Sensitivity to this product is rare.

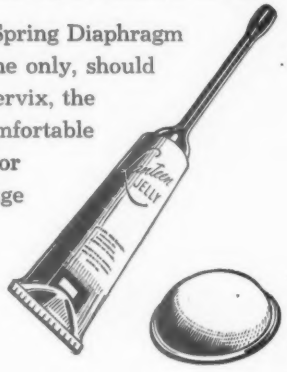
This display has been viewed by thousands of physicians and is another scientific exhibit presented by Schering Corporation, manufacturer of endocrine, x-ray diagnostic, chemotherapeutic and pharmaceutical products.

Toward a Better World

RADAR BRINGS "ALL-WEATHER" FLYING. The day has arrived when safe take-off, flight and landing can be made, regardless of darkness, fog or any weather conditions short of a full gale . . . through Radar. Ships at sea, likewise, can detect icebergs or other ships in time to avoid collision. Thus another wartime development leads to safer, better peacetime living.

An advance is also being made toward future sociological betterment by Lanteen Medical Laboratories' promotion of Lanteen products. These leaders in their field are produced under the most rigid scientific standards.

Instructions for correct placement of the Lanteen Flat Spring Diaphragm are easily understood. Since it is collapsible in one plane only, should entering rim of diaphragm become lodged against the cervix, the other rim cannot be forced into pubic arch if largest comfortable size is fitted. Available only on physician's prescription or recommendation. Distributed ethically. Complete package available to physicians upon request.



Lanteen

LANTEEN MEDICAL LABORATORIES, INC • CHICAGO 10

NEW BECOTIN WITH VITAMIN C

(Vitamin B Complex with Vitamin C, Lilly)

HIGH-POTENCY VITAMIN B COMPLEX AND VITAMIN C

'BECOTIN WITH VITAMIN C' (Vitamin B Complex with Vitamin C, Lilly) furnishes all the known water-soluble vitamins. In addition to the entire vitamin B complex, this product provides a therapeutic dose of the synthesized B vitamins and ascorbic acid.

General debility, lassitude, easy fatigability, anorexia, and belching and fullness after meals are commonly encountered symptoms of vitamin B complex and vitamin C deficiencies.

One Pulvule 'Becotin with Vitamin C' daily is adequate for the treatment of mild deficiencies; two or more pulvules a day are recommended for the more severe cases.

Available at prescription drug stores everywhere.

ELI LILLY AND COMPANY • INDIANAPOLIS 6, INDIANA, U. S. A.

EDITORIAL

FOREWORD

This, the March 1947 issue of the JOURNAL, *has been contributed by the New York Infirmary. All of the original articles in the Scientific Section have been written by Infirmary doctors; the case reports have been prepared by the Resident Staff. This presentation represents a cross section of the daily activities of the Infirmary in its various departments, fulfilling the threefold function of a hospital: the care of the sick, the training of physicians, and the testing of new ideas. The Feature articles which follow on succeeding pages have been written about the Infirmary, its history, its founders, its traditions, and its present needs.*

We are pleased to present this number, devoted to the New York Infirmary, in recognition of its more than ninety years of service to the community and to women physicians throughout the world.

—ADA CHREE REID, M.D., *Assistant Editor.*

THE NEW YORK INFIRMARY

THE PAST RECORD of this institution is the best indication of its future success. It has been the keystone of the careers of many of our distinguished medical women, who received here the training and opportunities to fit them for broader fields; and it will serve the same purpose for medical women of generations to come.

My relation with the New York Infirmary covers most of my medical career. I received my medical degree from the Women's Medical College of the New York Infirmary, and have been an active member of the Infirmary staff almost continuously through the succeeding years. This long association seems to qualify me to represent some of our noted alumnae of the past, who by their enthusiasm, energy, and loyalty did much to establish the enviable position we enjoy today. I have vivid recollections of such outstanding women as Dr. Martha Wollstein, who taught us pathology and later became one of the brilliant research workers at the Rockefeller Institute for Medical Research; Dr. Gertrude Kelly, who developed a surgical service which attracted many surgeons of that day; Dr. Helen Baldwin, who combined research and clinical medicine equally; Dr. S. Josephine Baker, who created the first child welfare bureau in the Department of Health, New York, which later became the model for the Children's Bureau in the United States Department of Labor; Dr. Caroline Finley, who conducted classes in practical obstetrics for students of Cornell University Medical College and was probably the foremost woman obstetrician of her time; Dr. Annie Daniel, who created a type of medical social service which included many of the new proposed methods for community care of families today; Dr. Emily Lewi, who developed a pediatric service which attracted some of the best young pediatricians and by her wise counsel carried many of them through the first years of practice. These women by their courage and vision and belief in an ideal made it possible for the Infirmary to survive hazards and vicissitudes through many uncertain years and still maintain the high standards of the institution, both in the care of the patients and as a training center for women physicians.

Now, I find myself still active among an entirely new younger generation to whom the need of such an institution is very real. For here young

women may put into practical use the knowledge acquired in their long course in medical college; here they have the opportunity to develop leadership by assuming greater responsibilities; here they may offer their patients the priceless gift of understanding and sympathy combined with the best that medical science can afford; here new ideas may be developed under the most ideal surroundings. For with the very cordial relations which exist between the Infirmary and its colleagues in New York, it can no longer be considered a limited women's hospital, but rather a center for women physicians and surgeons, where they may prove their value in the great scheme of the future of medicine.

Now we have that future to consider. We have reached the limit of expansion in our present buildings. Modern medicine is creating an ever increasing necessity for hospital practice for young physicians. Our staff must be enlarged to include all medical women graduates possible. We must give these well trained doctors adequate space to carry out their highest function—whether it be research, education, or treatment. All of us who have had the privilege of working at the Infirmary know that it inspires a spirit of emulation and loyalty that is an essential part of the development of physicians.

I believe that with a new modern hospital building and an expanded medical staff, the services offered by the Infirmary to the medical profession and to the community will place this institution among the best medical centers of the day.

ELISE S. L'ESPERANCE, M.D., *Editor*

Intra-Uterine Irradiation

A Modification of the Radiumhemmet Packing Method*

MARTHA ELIZABETH HOWE, M.D., F.A.C.S.
MARY A. JENNINGS, M.D., F.A.C.S.

I

CANCER OF THE BODY of the uterus is a disease to be treated primarily by surgery. However, not all such tumors are discovered in a technically operable status, without distant metastases or local extension incompatible with an expectation of surgical cure. Some tumors come to diagnosis still localized and technically operable, but borne by a hostess either unlikely to survive major surgery or unwilling to submit to any major surgical procedure. Such tumors become then clinically inoperable. For either technically or clinically inoperable cancer of the uterine body, irradiation offers the only probability at present of either alleviation or cure.

It has been obvious to many minds for many years that the straight tube, "tandem" or "string" of radioactive material could not deliver efficient irradiation to a tumor occupying the wall of an irregular sac-like cavity. To correct this error of application in the uterus, Friedman has devised the "hysterostat" [1], Schmitz the "Y" applicator [2], and Stowe the collapsable, or pleated, string of radioactive tubes [3]. In 1930 the Radiumhemmet group in Sweden began to pack the uterus with small uniform radium sources and established a fixed routine for this packing method which has been used in the Swedish Clinics since 1939.

The idea underlying these devices, and several others, is the same: to deliver radiation as uniformly as is mechanically possible to the wall of the entire uterus, whatever its individual size and contour. It is not feasible in this organ to deliver pinpoint radiation to a small tumor, nor can the extent of mucosal or myometrial extension by tumor, large or small, be predetermined. Therefore, it is essential to deliver both uniform and effective irradiation to the entire endometrium and as deep as possible into the entire uterine wall. The problem in this, as in all clinical radiation, is to deliver cancerocidal dosage without producing permanent intractable necrosis of the organ. Eventually we may be offered a short-lived fluid radioactive material of effective penetrating power, which can be introduced into cavities in some distensible limiting container, like a balloon. But today's cancer may not wait, and we are faced with the clinical necessity of approximating this ideal with material now available.

II

The basic principle of the Radiumhemmet method seems to us theoretically and mechanically to be the best: to pack the uterus full of uniform radiation sources small enough to permit contact irradiation of the cornua and all pockets which might harbor the source or extension of the original tumor. Furthermore, it is the simplest.

The routine of this method is based on a collection of radium element tubes, each containing 8 milligrams of radium salt. These basic tubes can be fitted into outer steel casings of four sizes, varying in diameter from 7.8 mm. to 13.8 mm. but of approximately the same length (25 to 29 mm.). The active length of all four sizes is that of the basic tube (19.3 mm.). The differences in diameter are achieved by air space between the inner wall of the applicator and the outer wall of the radium tube. The total filtration is the equivalent of 3 mm. of lead. The applicators are attached to braided steel wire. The uterus is packed with whichever size is considered suitable (with an optimum of 10 applicators per uterus) and unpacked after a time interval calculated to deliver 1000 gamma roentgens at a uniform depth of 1.5 cm., this depth representing the average thickness of myometrium. Individual dosage varies from 800 mgm. hours for a very small uterus (four applicators of "size 1") to 2000 mg. hours in a very large one (20 applicators of "size 4"). A second treatment is given after three weeks. One of the treatments is accompanied by radium treatment to the vaginal vault

*From the New York Infirmary for Women and Children, Department of Kate Depew Strang Clinic for Cancer and Allied Diseases.

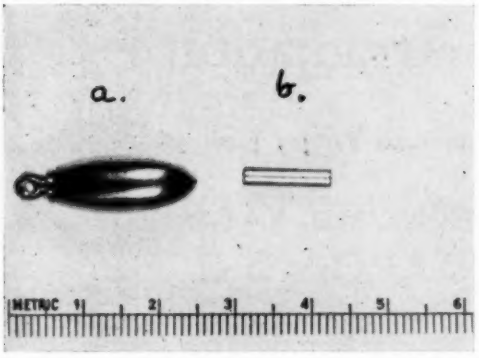


Fig. 1—(a) **Applicator.** *(b)* **Inner sheath of nickel-silver.**

and tube by means of cylinders of varying diameters; 1350 to 2250 mg. hours are delivered by this route. The combined total treatment to the uterus and vagina may vary from 2950 mg. hours (small uterus and narrow vagina) to 6250 mg. hours (large uterus and vagina). *The presumptive tumor dose is the same in all cases.*

This routine represents the basic technique. Teleradium, roentgen irradiation, special vaginal applicators, needles, and electro-desiccation are used as may be required to meet the complications of an individual case. External pelvic irradiation is not used routinely except for the technically inoperable case with pelvic extension.

Using this basic packing technique, the Radiumhemmet reports as of 1941 an average 20 to 25 per cent improvement in five year results ("freedom from disease" in proved cases treated by radiation only). For a detailed breakdown of statistics reference should be made to the original paper. A remarkable salvage for small yearly groups does not seem to us as significant as the consistent improvement sustained over a period of years.

III

After watching the method in operation at the Radiumhemmet and after examining the reports of results, we would accept the basic principle of the packing method, but wish to suggest a few minor modifications.

The statistics offered in the original paper indicate that the improvement in results after the packing method was adopted has not been appreciably altered by the addition to the technique of variation in the size of the applicators. The reason given for the use of four sizes is that thereby gross variation in *treatment time* could be eliminated. The questions of biologic effect,

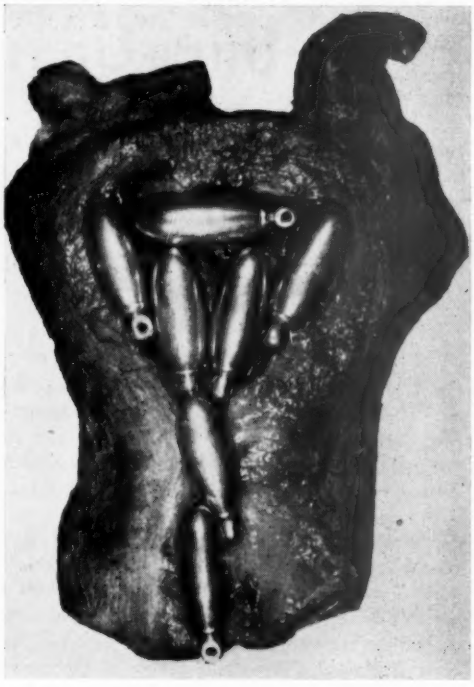


Fig. 2—**Applicators in place in sample autopsy specimen. Applicators are not threaded in this photograph.**

with variation in either intensity or overall treatment time, and of varying depth efficiency with "target" distances cannot be gone into at length. However, the Radiumhemmet tabulations of their measured radiation intensities and of treatment times, etc., do not seem to us to justify the use of different sizes of applicators on theoretic grounds.

Few institutions or individuals wish to bind their radioactive materials to one applicator or to one use. Therefore, it is advantageous to have applicators which can be loaded and unloaded and can make use of two or more forms of radioactive materials.

The Radiumhemmet applicators, racks, retainers, handling forceps, inserting instruments, etc., are beautifully designed and made, but they constitute a rather complicated and cumbersome armamentarium and a costly one to make, purchase, repair, replace, or modify.

IV

Modification of the Radiumhemmet Method. One size of applicator only is used (Fig. 1-a). It is shaped like an olive pit, 20 mm. in length (eye

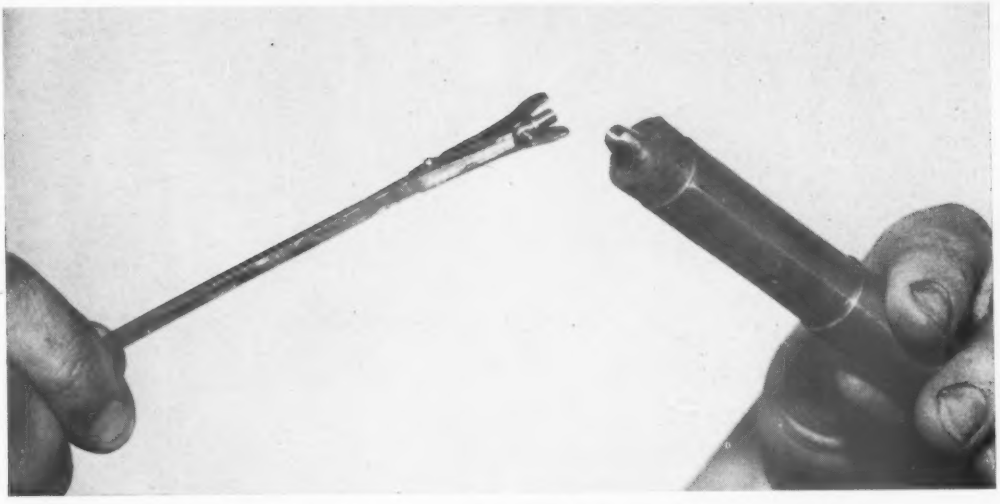


Fig. 3—**Handling tools, demonstrating method of unscrewing eyelet of applicator.**

excluded) and 8 mm. in maximum diameter, constructed as a shell of nickel-silver (18% nickel) of 1.5 mm. wall thickness. The central cavity is closed with a screw cap which is cast with an eyelet. The cavity will hold a radon "seed," a radium element capsule, four radium element "cells," or any other radioactive insert not over 12 mm. in length and 2 mm. in diameter. If a slim insert is used, such as a radon seed or a single cell of 1 mm. diameter, the sheath (Fig. 1-b) of 0.5 mm. nickel-silver is also inserted to maintain the source at center (and a suitable correction is made in the dosage for the additional filter).

This applicator applies itself well into the uterine cornua and will turn and slide smoothly against its neighbors, packing easily into any size or shape of uterine cavity (Fig. 2). There are no abrupt surfaces to impede insertion or removal and the shape tends to minimize the weak radiation areas at the ends of the source both per se and by the interlapping of applicators permitted.

Applicators are handled by simple holding tools (Fig. 3) and a standard radium bench and forceps. The loaded applicator is threaded with a loop of No. 3 Deknatel braided silk about 12 inches long and is lifted by the thread from stand (Fig. 4) to rack (Fig. 5). Each applicator is tagged at the far end of the loop with adhesive tape and the tags numbered across the rack. (Applicator "No. 8" is shown numbered and in place from left to right in the rack.) The rack of threaded numbered applicators is submerged in alcohol in a small basin and may be lifted in the operating room to the instrument table when the operator is ready to use the radium.

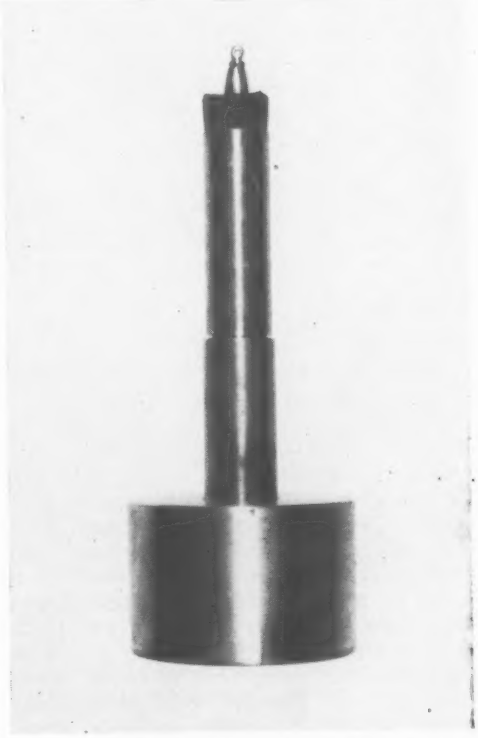


Fig. 4—**Holding tool, showing applicator in position with tool in stand.**

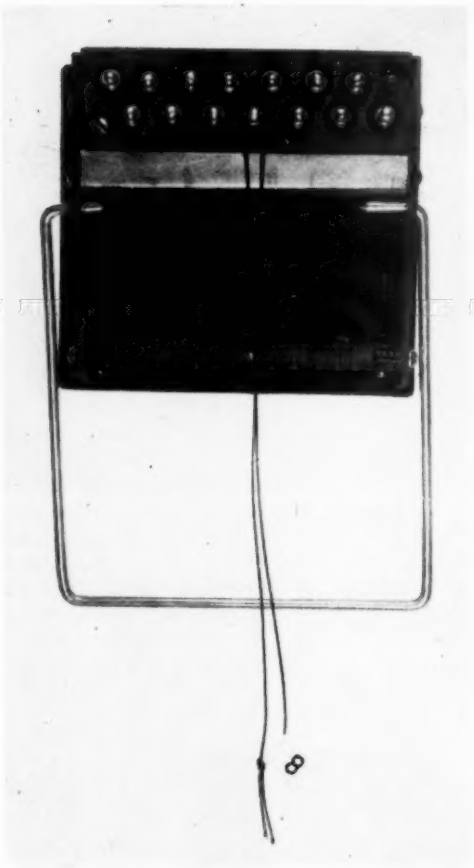


Fig. 5—**Applicator rack, constructed of hard rubber and bakelite, with detachable handle. One cm. of lead protects the rack below, and in front of, the row of applicators.**

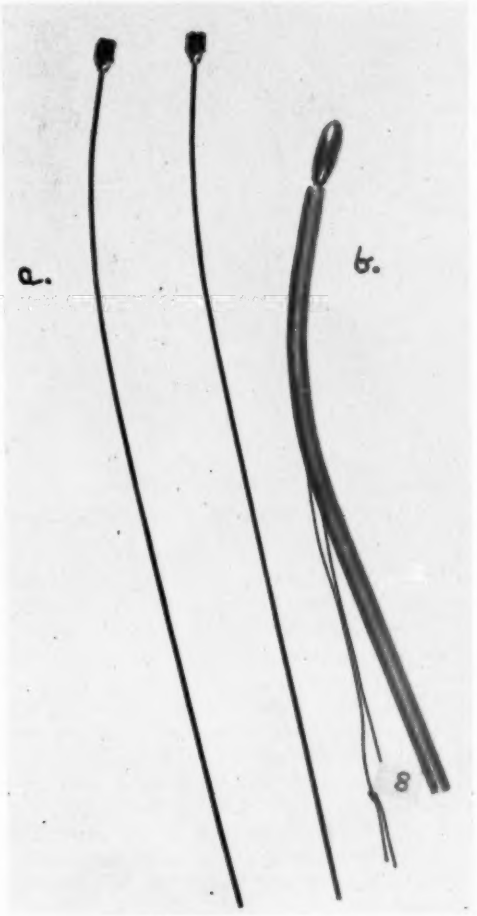


Fig. 6—**Inserting instruments: *(a)* Fine tools for cornual insertion; *(b)* tubular inserter.**

Applicators are picked up from the rack in sequence from "No. 1" by cupping the "eye" of the applicator into the saucer of an inserter (Fig 6), slipping the thread through a slot on the convex aspect of the inserter, and applying enough tension on the thread to hold the applicator firmly in position. This maneuver can be accomplished with one hand. The applicator is then passed through the dilated cervix and is released by relaxing the tension on the thread and withdrawing the inserter. The finer tools (Fig. 6-a) can be used to insert and maintain applicators in the right and left cornua, while a third is inserted between them. However, with the patient in slight Trendelenburg position, applicators inserted by the heavier tubular tool (Fig. 6-b) stay in good position. Packing is continued until the eye of the last applicator inserted protrudes from the cervical os. A suture tied with a slip knot prevents this applicator from moving. The cervical canal must be kept dilated, even were it not desirable to radiate it, to permit the later simple traction removal of applicators.

All cases are x-rayed to insure that perforation has not occurred and to check and improve the technique of insertion. Several such films are shown in Figure 7 in which good and bad insertions speak for themselves. Both flat and lateral films are taken. When the required dosage has been delivered, the slip knot is released and the applicators removed in reverse order (as of insertion) by traction on the appropriately numbered thread.

In calculating the dosage, the Radiumhemmet

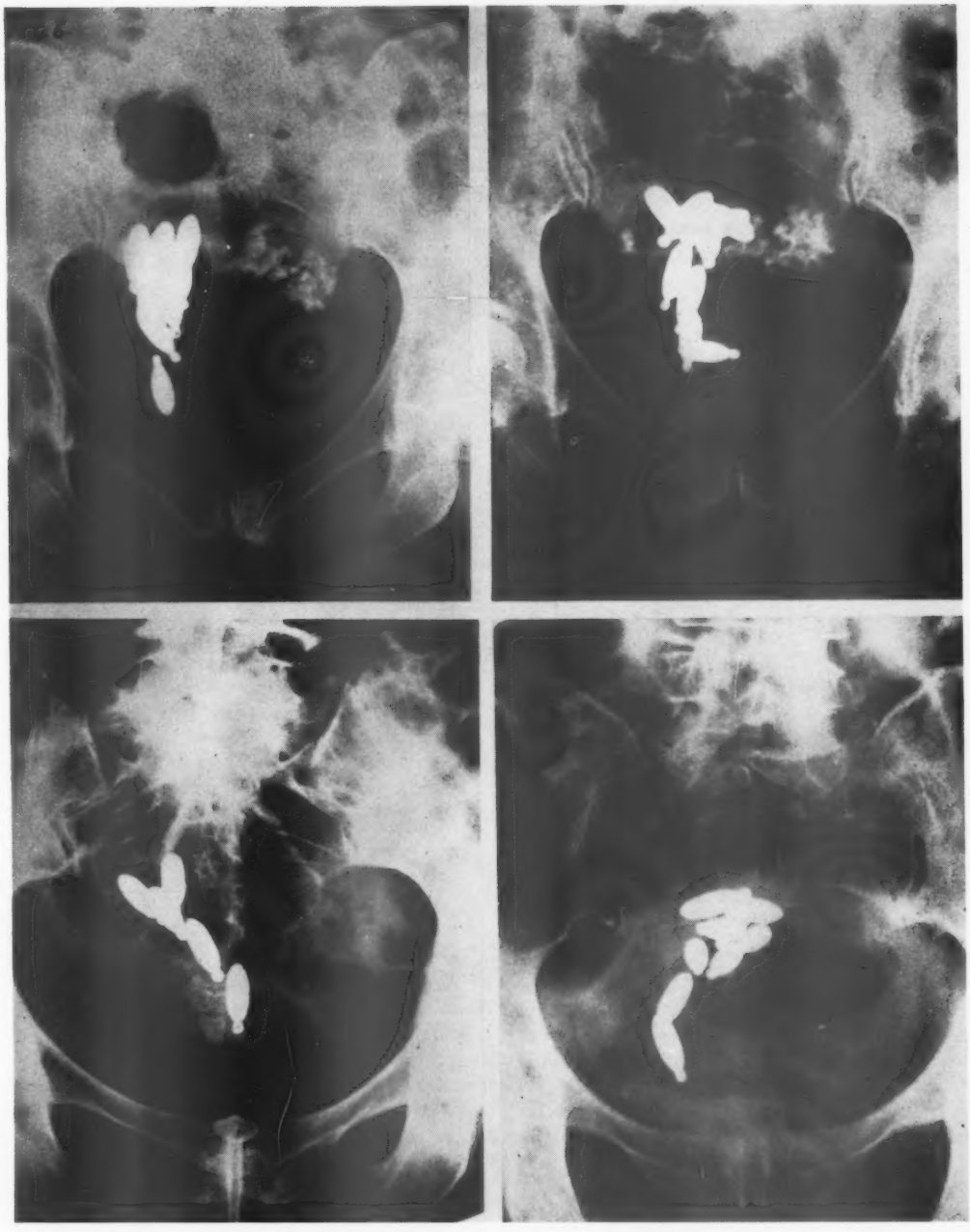


Fig. 7—Radiographs of applicators in the uterus.

schedule is used, modified to allow for difference in filtration and in length of source. For cancer we are postulating a dosage of 1000 gama roentgens at a wall depth of 1.5 cm. at each treatment.

(The exact dose to the endometrium presents a complicated problem in calculation and one subject to innumerable small variations in each case. A minimum of 4000 to 5000 gamma roentgens

should be delivered fairly uniformly whatever the number or combination of applicators.) Three such treatments are given at two or three week intervals. Penicillin is given throughout, and for 24 hours after, the radium placement. At least one uterine insertion is accompanied by treatment to the vaginal vault and tube (including the portio) by a vaginal applicator. The total treatment to uterus and vagina varies from about 3300 mg. hours to about 6000 mg. hours, depending on the size of the cavity treated.

Radiation of any desired intensity may be used depending on the insert. At the New York Infirmary we have been using, per applicator, four radium element cells of 1.33 mg. each. The intensity is, therefore, lower than that of the original method ($\frac{5.32}{8.00}$).

The few cases treated to date have offered no difficulty so long as care was taken to keep the cervical canal dilated with the last two applicators. No applicators have failed to return by simple traction and no uteri have been perforated yet. These accidents are risks which must be accepted for any method of intracavity irradiation.

The dosage now used requires acceptance of the Radiumhemmet results but not necessarily of their physical measurements. We expect to chart the physical dosages delivered and to acquire a sufficient number of operative specimens to give information as to the efficiency of the biologic dosages delivered, particularly to the myometrium. Continued use should suggest many improvements.

End results must wait on the passing of time, but while it is passing we feel some confidence that at least reasonable intra-uterine irradiation is being given.

V

Summary

Carcinoma of the fundus is a surgical disease, but to the inoperable case irradiation offers the only alternative treatment at present.

Of the methods devised to replace the old central tubular method of intra-uterine radium insertion, the Radiumhemmet packing method is the best in theory and simplicity and has resulted in sustained improvement in results.

A modification of this method has been devised, using multiples of one basic uterine applicator designed to fit reasonably all uterine cavity contours and effect uniform radiation of the entire cavity and myometrium.

The dosages delivered in three applications over a period of five to six weeks postulate a total minimum dosage of 3000 gamma roentgens at the serosal surface of the average uterus. The dosage to endometrium cannot be exactly calculated but can not be less than 10,000 gamma roentgens and probably averages at 12,000 to 15,000 gamma roentgens.

End results and further improvement in method must wait on the future and the study of uteri so irradiated.

Note: Basic applicator and inserters were designed by author and made by Mr. A. Schreiner, Memorial Hospital, New York. Handling tools and rack were designed and made by Mr. Schreiner.

Assistance in the calculated modification of the Radiumhemmet dosage chart was given by Miss Elizabeth Focht, Memorial Hospital, New York.

References

[1]Gray, K. A., Friedman, M., and Randall, W. S.: Surg., Gynec., & Obst. *82:* 386, 1946.

[2]Schmitz, Herbert E., Sheehan, John F., and Towne, Janet: Am. J. Obst. *45:* 377, 1943.

[3]Stowe, L. M.: Am. J. Obst. & Gynec. *51:* 57, 1946.

[4]Heyman, J., Reuterwall, O., and Benner, S.: Acta Radiol., Stockholm, *22:* 14, 1941.

Reading Disabilities in Children*

RUTH MORRIS BAKWIN, M.D.

Dr. Bakwin is Director, Department of Pediatrics, New York Infirmary

THERE IS A RELATIVELY large group of children whose reading ability is well below their ability in other fields. Until recently these children were considered wilful and careless or stupid. They did not get along well in school. Many were a source of disturbance in the class because of their hyperactivity. None read for pleasure, and most of them were unhappy.

This reading disability, or dyslexia, found in such children is the major cause for school retardation. In the New York Public Schools, children about to complete the eighth grade ranged in reading ability from below third grade to college level. Ten to fifteen per cent of the school population are suffering from disability in reading. A considerable number of these children have superior intelligence, and most of them have had the usual opportunities for reading at home. Because of inability to read and the resultant lack of interest in books, many of these children spend their time in athletics and outdoor activities, and some become unusually competent.

A large number of poor readers have no difficulty with numbers although occasional reversals occur, such as 24 for 42. Many may do superior work in arithmetic. There is no associated difficulty in reading music. Penmanship is not related to reading, but when spelling is poor, the child often becomes careless and indifferent. Furthermore, when his impression of the word is faulty and he does not remember whether the letter may be an *a* or an *o*, he may make a letter somewhat in between in the hope that the teacher may blame poor penmanship rather than poor spelling.

Boys have reading difficulties about four times as frequently as girls. There appears to be a hereditary factor, for the parents of these children are frequently found to be slow readers or poor spellers. Sometimes more than one child in a family is affected.

The picture is the same in most instances. The child is considered bright and develops normally until he enters school. He may have enjoyed being read to and have shown normal interest in numbers and letters. In public school such a child does poorly in the first grade; but, as much of the reading at this level is memorizing, the cause of his trouble is not recognized at once. In private school he may go three or four years before his difficulty becomes evident, because reading is not forced until the child appears ready. The average child can learn to read and write at about six years. this probably is the reason that children start school at that age. The child with dyslexia gets farther and farther behind. First, only reading and spelling are difficult; soon his disability affects his geography and history for he is unable to read his lessons; he can not understand the written problems in arithmetic. His examinations are poor, and he does badly in written work. Although the child's ability in class discussion and oral work may surprise even the teachers, he often has to repeat the grade again and again. He can not benefit from ordinary teaching, which must be supplemented by the text, so he fails as badly the second or third year in the same grade as he did the first year.

Naturally the teacher is baffled, often annoyed, and the parents are upset. The child is considered stupid and loses confidence in himself. He becomes emotionally upset and makes even more mistakes than are necessary. In many places, especially in some of the smaller localities, these children are ultimately classed as defectives and are put in ungraded classes in school. It is only in the sections that afford special facilities that the poor reader finds a different treatment. And this has been true only very recently.

There are many factors which may lead to reading difficulty. For convenience they have been divided into five groups: (1) lack of reading readiness; (2) physical handicaps; (3) developmental defects; (4) emotional handicaps; and (5) improper training. No one factor by itself will prevent normal reading but any one may seriously interfere with the child's learning.

Children with a reading difficulty cannot easily

*The Language Diagnostic Clinic, Pediatric Department, New York Infirmary, New York.

recognize the meaning of the written word. The complex mechanism necessary for understanding and reproducing written language is normally acquired much later than the auditory and coordinating background necessary for spoken language. Not every child of six years is ready to read. Readiness means not only a certain degree of intelligence but also mastery of speech, comprehension of directions, muscular coordination, ability to concentrate, etc. When the child is immature and has had only limited social experiences with little responsibility, he may be impeded in his ability to understand what he reads. He becomes bewildered and emotionally upset by his inability to succeed. This will further interfere with concentration and learning.

Immaturity is often the result of overprotection at home so the child's environment should be investigated and, if possible, corrected. Sometimes delaying the time of beginning reading for a year or two will be sufficient for the child to learn normally. Certainly pressure and stress will only cause more trouble.

The presence of a physical defect of some sort is a prominent factor in reading difficulties. Defective hearing is common among American children. When there is only partial deafness this is often entirely missed until the child enters school, partly because of the imitativeness of the infant and partly because so much of the communication with the young child is made up of gestures. Deafness should be suspected if the child constantly asks for repetition of directions.

Defective hearing is a greater handicap when the auditory method of reading is taught than with the sight method. (The former method pronounces the words phonetically; the latter teaches the child to learn words or even whole sentences without reference to their composition.) The child hears blurred or indistinct sounds, is unable to associate them with the words being read, and cannot recognize them later. The usual tests for hearing will disclose many of these defects. It is sometimes necessary to use an audiometer, which is more reliable than the common tests and which will differentiate between such conditions as regional deafness and "congenital word deafness," where general hearing is unimpaired, but understanding of the spoken word is defective. Correction should be undertaken by a good otologist.

Defective vision causes the child to see an indistinct image of the letters; therefore he must look several times at the word. He reads slowly and loses his place frequently. Where there is poor muscle balance and defective coordination of the eyes, the images on the retina fail to fuse and may overlap or fall one above the other. This causes considerable confusion in reading. Special instruments have been devised to photograph the eye movements, and there are various tests for fusion which, in addition to the regular eye examination, will aid in diagnosis. Much can be done in the correction of impaired vision. Exercise of the eye muscles, called orthoptic training, helps the child to learn to fuse the images of the two eyes.

Developmental defects may hinder the child in learning to read. Often there is mixed cerebral dominance; that is, the child is left-handed and right-eyed, or he may be right-handed but left-footed and left-eyed. Special tests to determine this are not difficult to administer. Sometimes the child has been trained away from the master hand, and the result is blurring and confusion of letters. The child is unable to comprehend what he reads; sometimes he has associated speech difficulties. In some instances there is improvement in reading if the child is retrained to the master hand.

There may be some developmental defect of the cerebral centers which deal with comprehension of graphic language. This condition is sometimes referred to as congenital word blindness, but Orton uses the word *strephosymbolia* meaning "twisted symbols." A child with this condition can copy words correctly but is unable to read them. The context is confusing, and the child can make nothing of it. There has as yet been no demonstration that reading difficulties are due to an organic lesion of any sort in the brain. Electroencephalograms in children with reading disabilities are not distorted in any way.

Children who are unable to read are almost invariably emotionally maladjusted. It is difficult to say whether the poor reading has led to the emotional disturbance or vice versa. Too early training with repeated failure certainly upsets the child. Where the child has been too long protected and is suddenly left to fend for himself in school, he may develop feelings of inferiority, become shy and timid, and be unable to undertake the task of reading aloud in school. If the child is ridiculed or shamed by school-mates or parents, he may refuse to try to read. The child who is backward in reading is easily embarrassed and makes more mistakes than necessary. He is apt to become inattentive, restless, easily distractable.

Too much pressure, repeated admonitions to study more, insistence upon his trying to read, help from the untrained parent only confuse the

child. He needs reassurance and confidence in his ability to succeed. His success in other fields should be applauded. Comparison with siblings must be avoided. There should be no pressure at home for better work. It should be understood that the inability to read is no more the child's fault than is color blindness or lameness after poliomyelitis.

Improper training is a cause of reading difficulties. There may be frequent absences from school or frequent changes of school with no consecutive teaching in the lower grades. Sometimes a technique of teaching reading is used which is unsuitable for certain children in the class. Some children learn well by the sight method, others can not grasp this and must be taught by the phonetic technique.

When the child is unable to keep up with his class in reading, his parents sometimes urge him to spend more time in study hoping he will improve. Great pressure is put on him. Parents and teachers are disappointed. He is unable to teach himself, or be taught by the usual technique and thus becomes embarrassed and unhappy, or resentful and negativistic. All these factors work together to prevent the child's learning to read. Only with careful diagnosis can the factors in the individual case be evaluated.

Remedial work should be undertaken only by a teacher familiar with the field. Improvement is related to the child's willingness to learn and it is sometimes weeks or months before the emotional blocking can be broken down sufficiently to allow the child to try. Thereafter progress is rapid. Instruction should start at the child's reading level and the material should be interesting and suited to his age. Only harm can be done by starting a ten-year-old with primers or the usual first-grade readers, no matter how poor is his ability. The child must be reassured of his good intelligence and repeatedly encouraged. All children except low-grade defectives can be taught to read. It is therefore deplorable that so many children are left to learn by themselves or are tutored by untrained persons.

Reading clinics are now springing up in the large cities. There are half a dozen in New York. In most instances equipment and material are available for adequate tests to determine the cause of the difficulty. The work is supervised by trained personnel and advice is given for treatment and training. In some places there are facilities for remedial reading associated with the diagnostic clinic. In others, remedial work is recommended, to be carried out in the regular school. Some cities, as St. Louis, have provided remedial work as part of the regular school program and others have provided it for special groups.

Cancer Extract

A cancer extract that destroys cancers in rats and also makes them immune to further cancers is announced by Margaret R. Lewis, M.D., Paul M. Aptekman, M.D., and Helen Dean Kind, M.D., of the Carnegie Institution of Washington in that institution's annual report recently issued.

Made at the Wistar Institute in Philadelphia, the experiments are believed to be the first in which such double action has been achieved. The extract is made by grinding up rat tumors, extracting with alcohol, and concentrating by distillation. In 56 or 58 rats the cancers were destroyed and the site of the cancer graft healed with only a slight scar. After one year 24 of the rats were still free of cancers. The extract also protected 60 per cent of injected rats against cancers of a different kind from that of which the extract was made.

In another development, a group of dyes, the Nile blues, was found by Dr. Lewis to inhibit the growth of sarcomas. The blues were fed to mice with oxazones, and held some sarcomas back to one-twentieth the size they ordinarily reach. Others were almost destroyed.—*Victor News,* January 1947.

The Significance of the Rh Factor in Obstetrics

IRJA ELIZABETH WIDENIUS, M.D.

Department of Obstetrics, New York Infirmary

THE RHESUS, or Rh, Factor is so named because of its discovery in the blood of Rhesus monkeys, in 1940, by the late Karl Landsteiner and his associate, Alexander Wiener. A substance was found in the serum of a rabbit previously immunized with red blood cells from a Rhesus monkey which would agglutinate the red blood cells of about 85 per cent of the white population. Since that time, determination of this phenomenon has been carried out with anti-Rh serum from women who have given birth to erythroblastotic babies or who have had repeated abortions or stillbirths caused by Rh incompatibility.

The Rh factor is an antigen, present in the red blood cells of about 85 per cent of the white population, which will cause iso-immunization when it reaches the circulation of those individuals who do not have this antigen present in their own red blood cells. It is inherited according to Mendelian law. Iso-immunization occurs in individuals of the same species when anti-bodies are produced by the presence of an antigen. Testing with anti-Rh serum reveals that 85 per cent of the population is Rh positive, and 15 per cent is Rh negative.

Sensitization of a woman may result from Rh factor incompatability during blood transfusion or intramuscular injection of blood. A history of blood transfusion with subsequent reaction suggests incompatability of blood type or the Rh factor or a reaction to some pyrogenic material in the apparatus or solutions used.

Iso-immunization of the mother to the Rh factor from the blood of the fetus causes hemolytic disease of the newborn. Fortunately, iso-immunization of the mother through the Rh antigen in the fetus does not always occur when the mother is Rh negative. Hereditary differences or permeability differences in the placenta may be the cause for some of these variations. It is felt that the damage to the fetus occurs in the following manner: the anti-Rh agglutinin of the mother permeates the placenta to enter the fetal circulation. These agglutinins combine with the fetal red blood cells which are Rh positive and make them susceptible to hemolysis by the complement present in the fetal blood. Blood destruction takes place. The symptoms of jaundice, anemia, and a high icteric index may occur singly or in any combination. Because of the progressive blood destruction, an attempt is made by the fetus to renew its red blood cells. Erythroblastosis results when erythroblasts are formed at a higher than normal rate. All children born of an Rh negative mother and an Rh positive father do not show symptoms of hemolytic disease of the newborn. When incompatability is suspected, it is wisest to ascertain definitely the Rh of both mother and father. Prognostication of the potential damage to the fetus can be determined by quantitative testing of the mother's blood.

There seem to be two distinct types of antibodies present in the mother's blood. The first is the Rh agglutinin and the second is an antibody which combines with Rh positive cells but does not cause them to agglutinate. Such a serum is considered to contain "blocking antibodies." Under ideal conditions, agglutination of Rh positive red blood cells will occur.

Emergency blood replacement in the mother whose blood is Rh negative, should always be made with Rh negative blood of the same type, to avoid sensitizing the mother to the Rh factor. This will avoid immediate and remote difficulties.

Routine determination of the Rh factor and blood types in all pregnant women should be made early in the pregnancy, and at the same time that the blood for serology is taken. All patients with a history of transfusion reaction and all Rh negative patients should have their husbands' blood type and Rh factor determined. In a few cases, the mother may be Rh positive and the father, Rh negative.

Treatment of the hemolytic disease of the newborn is best carried out by complete replacement transfusions of Rh negative whole blood, in

amounts which will depend entirely on the severity of the disease and the weight of the child. The mother's blood should not be used. If the mother's blood must be used, the blood cells should be washed before injection into the fetal circulation.

Satisfactory testing sera is not available in any great quantities. Consequently, the determination of the Rh factor should be done in a laboratory with adequate facilities and properly trained personnel.

Bibliography

Landsteiner, K., and Wiener, A. S.: Proc. Soc. Exper. Biol. & Med. *43:* 223, 1940.

Wiener, A. S., and Peters, H. R.: Ann. Int. Med. *13:* 2306, 1940.

Levine, P.: J. Pediat. *23:* 656, 1943.

Wiener, A. S., and Wexler, I. B.: Am. J. Clin. Path. *13:* 393, 1943.

Levine, P., Burham, L., Katzin, E. M., and Vogel, P.: Am. J. Obst. and Gynec. *42:* 925, 1941.

Weiner, A. S.: Am. J. Clin. Path. *15:* 106, 1945.

Race, R. R.: Nature, London, *153:* 771, 1944.

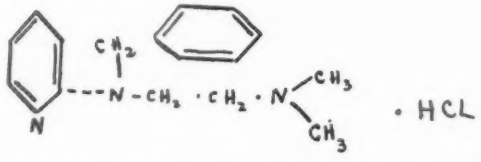
Wiener, A. S.: Proc. Soc. Exper. Biol. and Med. *56:* 173, 1944.

PYRIBENZAMINE *Report on Two Clinical Experiments*

LEONI NEUMANN CLAMAN, M.D.

Attending Physician in Allergy, Department of Medicine, New York Infirmary

N-pyridyl-N-benzyl-N - dimethylethylenediamine monohydrochloride, known as pyribenzamine, is a synthetically produced substance whose pharmacologic action is characterized chiefly by its capacity to antagonize histamine and to prevent or alleviate certain allergic symptoms. Chemically, it has the following structural formula:



It is a white, crystalline, stable, non-hygroscopic compound, with a melting point of 189 to 191°, and is readily soluble in water at room temperature.

In order to study its effect on the immediate whealing reaction and demonstrate its antagonism to histamine, the following experiments were performed.

Six patients of known sensitivities were taken at random. On the right arm intradermal tests were made of a known antigen in each case, in serial dilutions, and also of serial dilutions of histamine. The wheals were read in ten minutes and tracings of them were made. Then each patient was given 150 mg. of pyribenzamine, and after an interval of fifty minutes the same tests were made on the other arm, and the results noted after ten minutes.

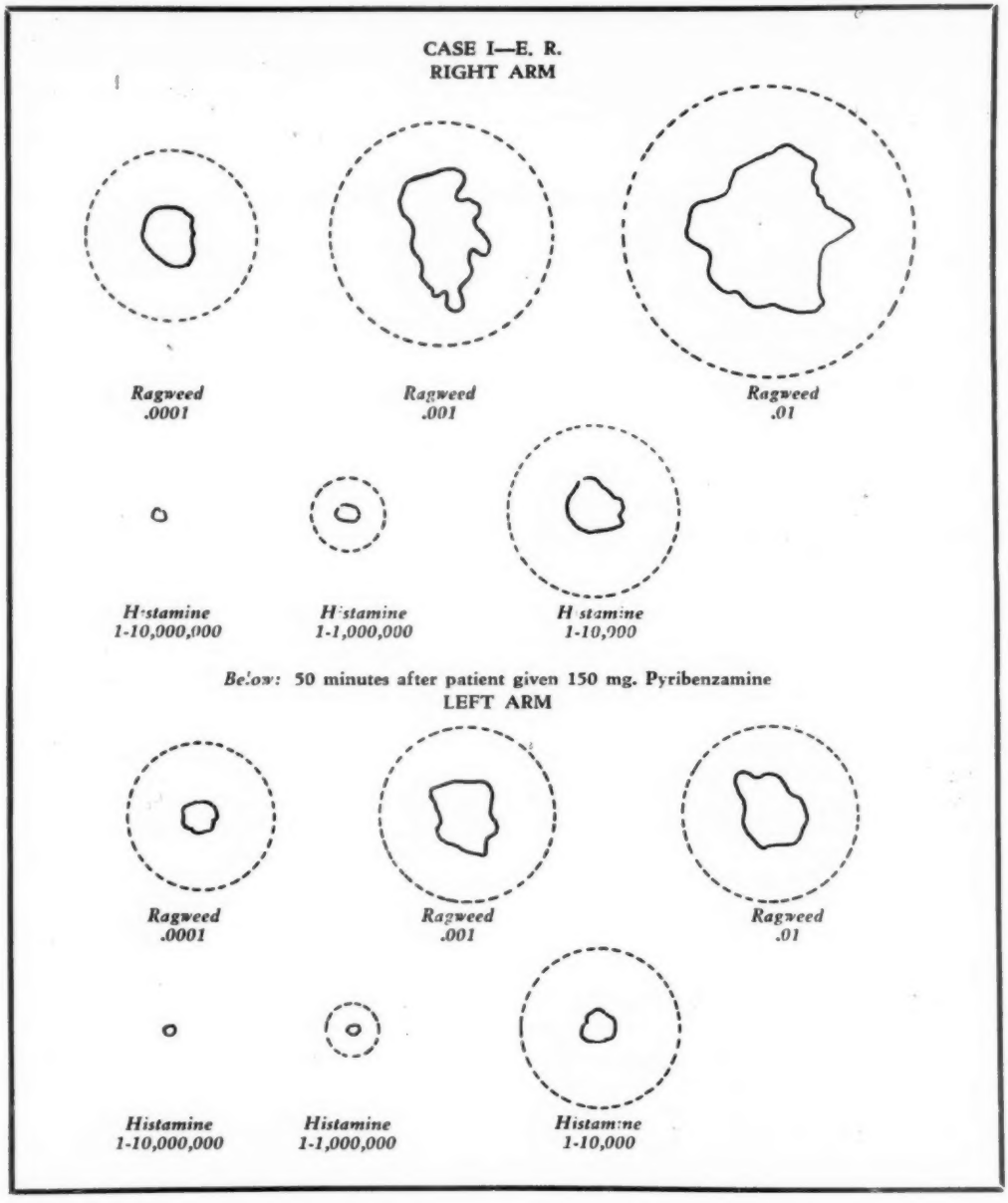
In every case, the wheals and the flares resulting from injections made after the administration of pyribenzamine were smaller than those in the first test, as is shown by the tracings. The dotted line represents the erythematous flare, the solid line, the wheal itself.

(Tracings of Two Patients on Following Pages)

One patient complained of slight nausea and slept for two hours after reaching home. The others mentioned no discomfort.

The effect of pyribenzamine on patients to whom histamine was given in the form of injection was as follows:

Five patients, known to be allergic, were each given injections of 0.1 cc. of histamine, 1-1000. They were then closely observed for the appearance of a flush on the face, which was evident in two minutes in three cases, in three minutes in one case, and in seven minutes in one case. Pyribenzamine, 100 mg., was then given to each, and after thirty minutes 0.1 cc. of histamine, 1-1000, was injected. There was a longer interval before the appearance of the flush, the time varying from four to eighteen minutes, and in one case additional injections of histamine were necessary to

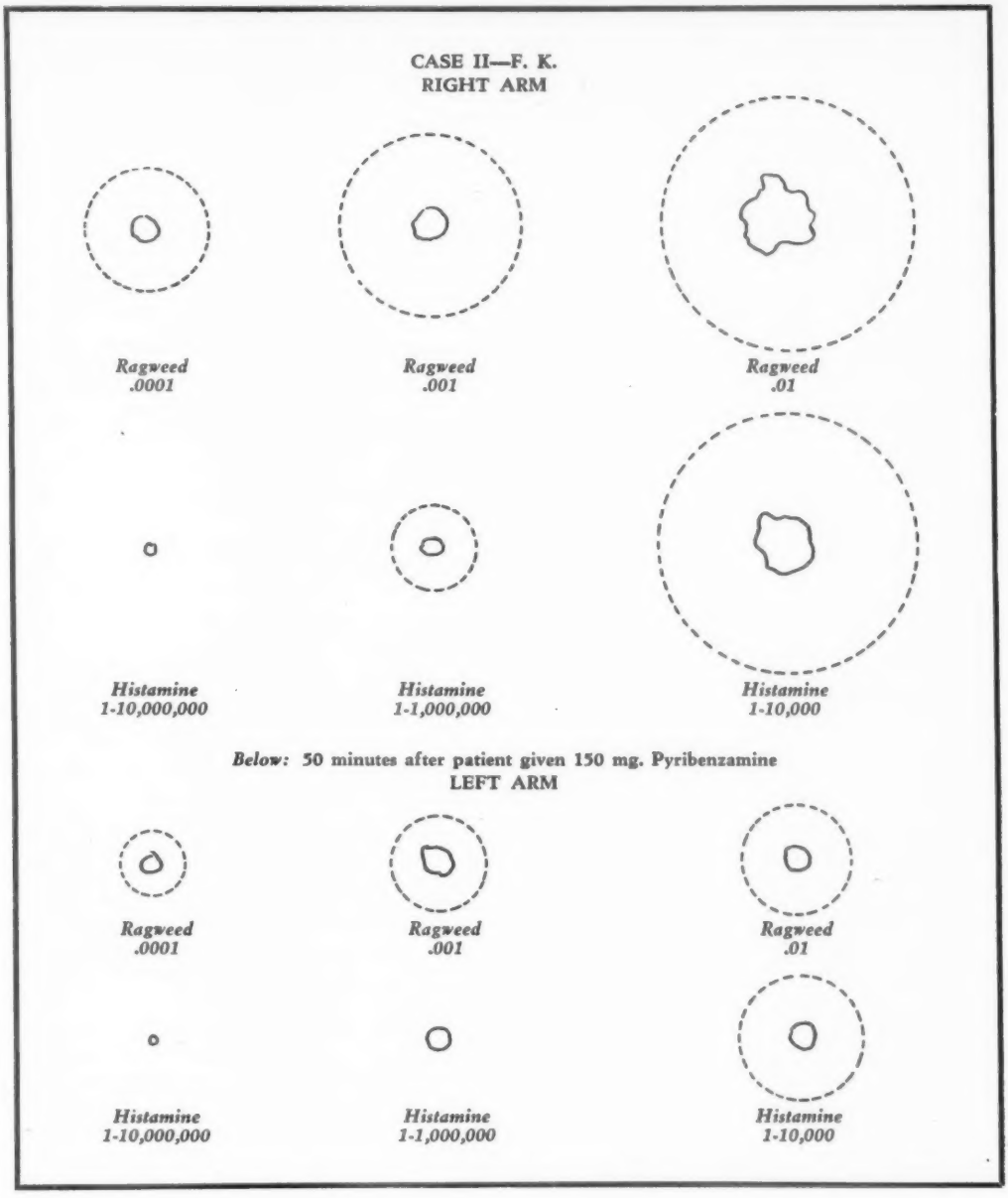


produce it. In one patient, who had shown a flushed face in two minutes after the original injection of histamine, 0.1 cc., even 0.4 cc. produced no flush after pyribenzamine.

Conclusions

Both the anti-histaminic action of pyribenzamine and the alleviation of the whealing reaction can be demonstrated clinically. None of the patients complained of constitutional symptoms which would ordinarily result from the injection of the same amount of antigen in such sensitive subjects in the same period of time. This was interpreted as showing the effect of pyribenzamine in inhibiting development of allergic symptoms.

Note: The pyribenzamine used was supplied through the courtesy of Ciba Pharmaceutical Products, Inc.



Bibliography

Feinberg, S. M., and Friedlander, S.: Relief of Dermographism, etc. J. Allergy, 16: 296, 1946.

Feinberg, S. M., and Friedlander, S.: Histamine Antagonists, III. J. Allergy, 17: 129, 1946.

Levin, S. J.: Benadryl in Allergic Diseases. J. Allergy, 17: 145, 1946.

Mayer, R. L.: Antihistamic Substances. J. Allergy, 17: 153, 1946.

Arbesman, C. E., Koepf, G. F., and Miller, G. E. Some Antianaphylactic and Antihistaminic Properties of Pyribenzamine. J. Allergy, 17: 203, 1946.

Feinberg, S. M.: Histamine Antagonists. J. Allergy. 17: 217, 1946.

Dr. Bogatko is Associate Attending Surgeon, Department of Surgery and Gynecology, New York Infirmary

The Transplantability of Autologous Mammary Tissue in the Albino Mouse

FRANCES H. BOGATKO, M.D.

THIS STUDY OF THE transplantability of mammary tissue in the albino mouse was undertaken as a preliminary step in the experimental production of carcinoma in transplanted mammary tissue by the injection of carcinogenic substances. It soon became evident that the transplantation of mammary tissue formed a problem in itself and this report is based upon the accumulated data resulting from the work.*

A careful survey of the literature on the subject reveals the fact that very few investigators have recorded any attempts to transplant the mammary glands in any animals, and only one recorded experiment of this kind was performed on albino mice. In 1898, Ribbert, after repeated unsuccessful attempts to transplant small fragments of mammary tissue into various subcutaneous sites in a guinea pig, finally succeeded in transplanting the whole gland of a two-day old guinea pig into a subcutaneous pocket that he formed on the external surface of one ear of the animal. He recorded the observation that five months later, after parturition, the young suckled from the transplanted secreting gland. In 1911, Calame made autologous mammary gland grafts into the spleen in rats and found, after many months when the animals became pregnant, that the spleen secreted a fluid "analogous to milk." However, no histological details were given regarding the transplant. In 1929, Polissadowa and Bjeloser investigated both autoplastic and homoplastic mammary gland transplants in dogs and found that in 20 transplants, observed from one to two years, histological sections showed atypical epithelium that presented merely a morphologic similarity to carcinoma. Albert Fischer performed transplant operations on the mammary glands of albino mice, and in 1937 and 1938 published three papers on this work. He reported the development of an epidermoid cyst in the transplant of one animal, of a sarcoma in another, and of carcinomata in fifteen other mice, following transplant operations of autologous mammary gland tissue. In this study he used 500 mice. In 14 of the 15 mice in which he reported the development of carcinoma, the autologous mammary transplants plus a piece of the denuded tail of the animal were retransplanted two or three times to different sites on the animal's body. In 1939, Henning Heide-Jorgensen, from the same laboratory, reported the development of a metastasizing carcinoma in an autologous mammary tissue transplant in an albino mouse.

Since the anatomy of the normal mammary glands of the albino mouse varies, not only at different ages but during successive estrous cycles, a brief review of this subject becomes pertinent. There has been only one recorded study of the normal development of the mammary apparatus of the albino mouse, that by Turner and Gomez in 1933. The mammary apparatus of the female albino mouse, as described by these workers, normally consists of five pairs of glands. The nipples in the female are located in two V-shaped areas; the cervical thoracic and sternal pairs form a V-pointing cephalad, and the abdominal pairs form a V-pointing caudad. There are usually ten, but there may be eleven or even twelve nipples. These writers divide the development into the following stages; embryonic and fetal development, prepubes-

*This work was done in the Department of Pathology of New York University College of Medicine, during a Graduate Course in Surgery.

cent, pubescent, pseudopregnancy, pregnancy, lactation, and involution. The embryonic and fetal development includes all changes from the earliest appearance of the anlage to the formation of the primary duct. During the prepubescent stage, the primary duct becomes completely canalized and there follow extensive growth and progressive canalization of the secondary, tertiary, and quaternary sprouts in the female; whereas in the male, the primary sprout or duct remains rudimentary throughout life. During the recurring estrous cycle there are cyclic changes in the mammary duct system following the ovarian cycles. As puberty approaches, the mammary ducts begin to grow and proliferate and further growth occurs at each estrum until at maturity (50 to 60 days) the duct systems cover most of the ventral, thoracic, and inguinal regions. After a number of estrous cycles, the gland is characterized by the presence of long slender ducts with relatively few side branches. During proestrum, the ducts of the gland exhibit long slender branches which have end buds along their course. At estrum, the small end buds show evidence of growth, new end buds appear, and the ducts show marked distention with fluid. During metestrum, slight retrogressive changes occur. Following a sterile coitus, the luteal phase of the estrous cycle is lengthened to about ten days, and when this occurs a hyperplasia of the ducts and lobules is found which is comparable to that observed during the first half of pregnancy. During the first half of pregnancy (10 days) there is a hyperplasia of the ducts and lobules; and during the second half, the growth stage is followed by gradual initiation of secretion, causing first an enlargement of the epithelial cells of the alveoli and then of the lumen with the discharged secretion. During the entire period of lactation, the glandular parenchyma predominates with the stroma appearing very slight in amount. Following weaning, the accumulation of milk inhibits further secretory activity. There follows a gradual resorption of the milk in the lumen of the alveoli and the ducts and a consequent collapse of these structures so that on the 10th day, the glands appear similar to those at the end of pseudopregnancy. The production of fully developed mammary glands and their functional activity requires synchronization between the ovaries, the pituitary gland, and the uterus. It is now well established that coincident with accelerated ovarian development at puberty the rudimentary gland undergoes further proliferation. The albino mouse belongs to the "short cycle" form and has a short follicular or estral phase. Bradbury and other investigators have reported progressive cumulative development followed by regression correlated with the cycle. Other workers believe that it is impossible to correlate the state of the mammary glands with the state of the estrous cycle. Gardner observed that although definite cyclic changes occur in the virgin mammary gland, such changes are not detectable after the glands have progressed through pregnancy and lactation. Although many workers have reported interesting results following the administration of various estrogenic substances, singly or in sequence, our knowledge of the hormonal regulation of the mammary glands is still limited. The changes observed in these experimental studies are unlike the uniform normal development found in glands proliferating under the stimulus of the animal's own hormones. There appears to be an interrelation between the ovarian and lactogenic hormones: the former furnish a growth stimulus for the mammary gland and prevent lactation, whereas the lactogenic hormone is concerned with the initiation and maintenance of lactation. Mammogen is the term employed by Lewis and Turner to designate the hormonal complex in the anterior pituitary gland concerned with the development of the mammary gland. There has been a recorded study of two factors, Mammogen I, a duct growth factor, and Mammogen II, believed to be responsible for the completion of mammary development, causing growth of the lobule-alveolar system. At present there does not seem to be sufficient valid data to support the mammogen hypothesis. W. O. Nelson in an excellent review of studies on the endocrine control of the mammary gland states that purified hypophyseal lactogenic hormone does not serve as a complete replacement for the animal's own pituitary gland in causing or maintaining normal lactation in hypophysectomized rodents.

Since transplantation would interrupt the nerve supply, it would be of interest to review some studies regarding the nerve stimuli and reactions on the mammary gland. Except for some studies pertaining to lactation, very little is reported in the literature. Selye and Collip, and Thompson, Selye, and McKeown found that it was possible to induce complete proliferation of the mammary glands in non-pregnant animals through mechanical stimulation of the nipples by an actively suckling litter. Furthermore, such animals actually lactated and were able to raise the litters of other animals. As the estrous cycles were stopped or greatly prolonged the general reaction was termed "suckling pseudopregnancy." It was also observed that the stimulus of suckling would maintain active lacta-

Fig. 1 (Above)—Group I, series B. Epidermoid cyst in 150 day transplant at root of tail in a prepubescent male albino mouse.

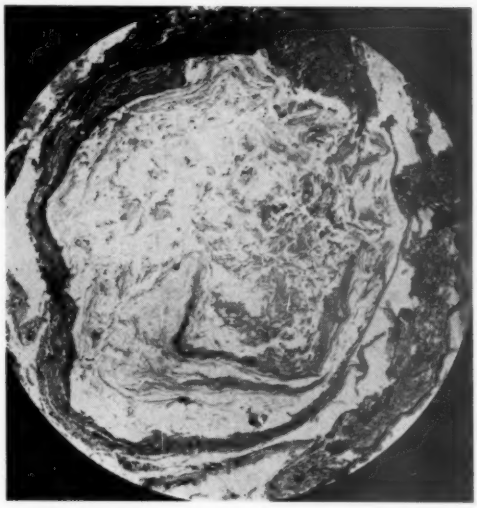


Fig. 2 (Right)—Histological section of epidermoid cyst shown in Fig. 1.

tion over considerable periods of time, even in animals in which removal of milk was prevented by ligation of the galactophores. On this basis it was held that the act of suckling reflexly stimulates the production of the lactogenic hormone by the hypophysis and that the involution of the mammary glands after weaning is conditioned by the withdrawal of the nervous stimulus of suckling rather than by the accumulation of the products of secretion. Additional experiments have led them to suggest that suckling maintains the secretion of prolactin.

Since these studies indicate that various periods of development, correlated with mammary gland changes, are under the influence of hormones, several groups of mice were used in order to ascertain whether the age and physiological status would exert any effect on the transplanted mammary gland tissue. These groups consisted of prepubescent, pubescent, adult virgin, pregnant, and postpartum lactating mice. In some groups there was postoperative mating of the mice.

Materials and Methods

Commercial Swiss stock mice from Rockland Farms, New York, were used. The incidence of spontaneous mammary gland carcinoma is given as about 7 per cent by these dealers. Seventeen generations of mice bred in this laboratory were represented. Litter mates were used whenever possible. A total of 201 mice of different ages and physiological status (179 female and 22 male) was used.

Operative Procedure

Under ether anesthesia, a piece of mammary tissue measuring 1 to 2 mm. in the greatest diameter, with or without the nipple, was taken from one or both inguinal mammary glands. A transverse incision was made in the skin in the midline of the abdomen of the same animal, about 0.5 cm. below the lower tip of the sternum, and the tissue was transplanted subcutaneously in this area. The incision was closed with a suture of No. 00 plain catgut. The site from which the mammary tissue was taken was similarly closed. In some cases the transplant was made to the side of the root of the tail. In the controls, which were made in each group, a piece of skin was similarly transplanted in mice of the same age and physiological status. In each animal a piece of the gland was examined histologically to verify its nature. At autopsy, histological sections were prepared from the transplant or the site of the transplant. Histological sections were also made in every control animal.

General Care

The animals were housed in glass jars with removable screen covers and were fed Purina Checkers with the addition of lettuce two times a week. Although an attempt was made to main-

Fig. 3 (Above)—Group II, series B. Epidermoid cyst in 30 day transplant at root of tail in a pubescent male albino mouse.

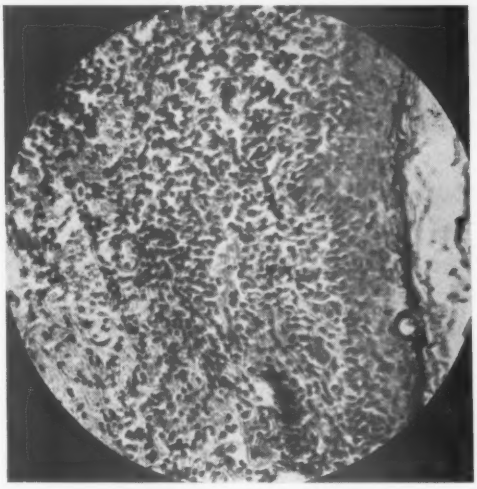


Fig. 4 (Right)—Histological section (high power) of epidermoid cyst shown in Fig. 3.

tain the temperature between 60 and 70° F., the animals were subjected to quite high temperatures during the summer and to rather low ones in the winter and spring. Daily observations were made of the animals' general condition and the wounds and transplants were inspected at two or three day intervals.

Group I: Prepubescent

Thirty-seven mice (25 female and 12 male) were used. The ages ranged from 40 to 45 days. Eight females and two males were used as controls. One or two pieces of mammary gland tissue, without the nipple, were transplanted to the side of the root of the tail. No mice were mated. They were observed from 35 to 150 days.

Results: All transplants were absorbed by the 8th day except in two females and one male. In these animals the transplants slowly increased in size. The mice were sacrificed at 120, 131, and 150 days respectively. On histological examination of the transplants, there was no evidence of mammary gland tissue, but an epidermoid cyst was found in each. The epidermoid cysts were soft, yellow, ovoid masses, measuring 1 to 3 mm. in the greatest diameter and firmly adherent to the skin. One (150 days) was also adherent to the peritoneum. They were well vascularized and surrounded by a fibrotic capsule and presented the usual histological characteristics of an epidermoid cyst. No spontaneous malignant tumor developed in any of the other mammary glands.

Group II: Pubescent

Twenty mice (10 female and 10 male) were used. The ages ranged from 45 to 50 days. Pieces of mammary gland tissue, without the nipple, were transplanted to the midline of the abdomen and the root of the tail. Eight females and two males were used as controls. No mice were mated. The animals were observed for periods ranging from 30 to 100 days.

Results: In all but one male mouse, the transplants had been completely absorbed by the 12th day. In this animal, histological examination showed no evidence of mammary gland structure, but an epidermoid cyst was present in the transplant 30 days after operation. No malignant tumor of the other mammary glands occurred.

Group III: Adult Virgin

105 adult virgin female mice, 70 days old, were used. There were four subdivisions of this group. Five controls were used in each subdivision. In all mice, two transplants were made to the midline of the abdomen.

A. In 15 mice, two pieces of mammary gland tissue, minus the nipple, were transplanted to the midline of the abdomen. The animals were never mated postoperatively. They were observed for 392 days.

Results: All transplants had been completely absorbed by the 8th day. On histological examination of the site of transplantation, no evidence

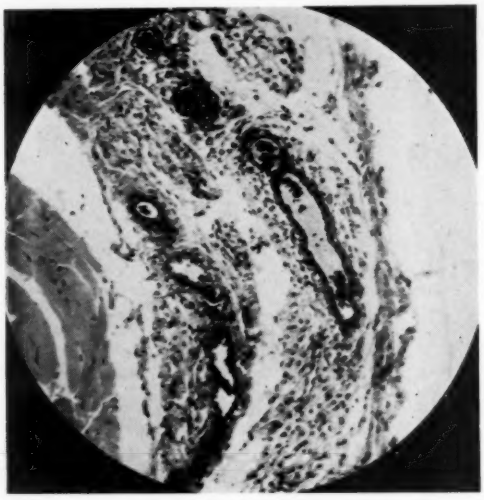


Fig. 5.—**Group III, series B. Histological section showing viable mammary gland tissue in 40 day transplant in an adult virgin female mouse.**

of breast tissue could be found. One adenocarcinoma developed in one of the other unoperated mammary glands, at about 290 days.

B. In this group, 40 adult virgin mice were used, and the mice were mated four days after two pieces of mammary tissue, minus the nipple, had been transplanted to the abdomen. All mice had one or two litters postoperative. The animals were observed for 150 days.

Results: All transplants had been absorbed by the 10th day, except in one mouse. This transplant measured about 2 mm. in its greatest diameter and on histological examination of material removed at biopsy, 40 days after operation, viable breast tissue was found. No malignant tumor occurred in the other mammary glands.

C. In this group of 25 mice, mammary tissue, plus the nipple, was transplanted to the midline of the abdomen. The mice were not mated. They were observed for 120 days postoperatively.

Results: In all but one animal the transplants had been completely absorbed by the 15th day. The one transplant (88 days) remaining was removed and on histological examination showed a retention cyst. No evidence of breast structure was found. No malignant tumor occurred in the other mammary gland.

D. This group consisted of 25 mice. A piece of mammary tissue, plus the nipple, was transplanted in the same manner, and four days postoperatively, the mice were mated. Each animal had one litter. They were observed from 200 to 392 days.

Results: In these animals, 14 transplants persisted for about 10 days. At autopsy, 8 exhibited only microscopic nests of necrotic cells and masses of fat. One had an abscess and two showed hyperplasia of the transplanted glands. In three mice, histological section showed retention cysts lined by cuboidal epithelium and also some evidence of breast structure. In five mice (three of which had developed cysts) spontaneous adenocarcinoma occurred in another mammary gland between 310 and 350 days.

Group IV: Animals in Which Sterile Coitus Occurred

These four animals had been mated and were to be placed in the pregnant group. They were isolated, together with the other pregnant mice. Transplants were made of a piece of mammary gland, minus the nipple, to the abdomen. It was found later that they were not pregnant because of a sterile coitus. They were not mated subsequent to the transplantation operation. They were observed for 392 days.

Results: In two of the four animals, the transplants had been absorbed by the 12th day. In the remaining two mice, histological section of the transplants (at 31 and 58 days) showed an epidermoid cyst. No malignant tumor of other glands occurred in this group.

Group V: Pregnant

In this group of 25 pregnant mice, a piece of mammary tissue, minus the nipple, was transplanted to the abdomen four days after mating. The mice again were mated 25 days postoperatively (8 days postpartum). All had one, and some two, litters.

Fig. 6.—**Group V. Epidermoid cyst in 131 day transplant in abdominal wall of a pregnant albino mouse.**

AUTOLOGOUS TRANSPLANTS OF MAMMARY GLAND TISSUE IN ALBINO MICE.

GROUP	PHYSIOL. STATUS	SEX	NO. USED	AGE IN DAYS	MATERIAL FOR TRANSPLANT	SITE OF TRANSP.	POSTOP. MATING	NO. OF LITTERS	POST-OP OBSER. PERIOD IN DAYS	POSITIVE GRAFT OR CYSTS	SPONTAN. MALIGNANT TUMORS OF OTHER GLANDS
I	PREPUB.	F	25	40-45	Piece minus nipple	Root of Tail	No	0	35-150	2 Ep. Cyst	0
		M	12	40-45						1 " "	0
II	PUBES.	F	10	45-50	Piece minus nipple	Abdomen Root of tail	No	0	30-100	0	0
		M	10	45-50						1 Ep. Cyst	0
III	ADULT VIRGIN	F									
	A		15	70	2 pcs. minus nipple	Abdomen	No	0	392	0	1
	B		40	70	2 pcs. minus nipple	Abdomen	4 da. postop.	1-2	150	1 positive take	0
	C		25	70	2 pcs. plus nipple	Abdomen	No	0	120	1 cysts	0
	D		25	70	2 pcs. plus nipple	Abdomen	4 da. postop.	1	392	3 cysts	5
IV	ANIMALS IN which sterile coitus occurred	F	4	70	piece minus nipple	Abdomen	No	0	392	2 cysts	0
V	PREGNANT	F	25	120	Piece minus nipple	Abdomen	25 days postop.	1-2	392	5 cysts	0
VI	POST-PART LACTATING	F	5	60	Piece minus nipple	Abdomen	No	0	392	0	0
			5	120	Piece plus nipple	Abdomen	5 days postop.	3	180	0	0

Controls were made as usual on 5 pregnant mice. They were observed for 392 days.

Results: In all but five mice, all transplants had been absorbed by the 12th day. The transplants in these five mice increased in size gradually and were removed at various times. The ages of the transplants were 31, 38, 58, 102, and 131 days. No malignant tumor occurred in any of the other mammary glands.

On histological examination these transplants showed only necrotic cells.

Group VI: Postpartum Lactating

A. Five postpartum lactating mice were used. Transplants of mammary gland tissue, minus the nipple, were made to the midline of the abdomen 15 days postpartum. The mice were never mated after operation. Controls were made on 5 postpartum (15 days) lactating mice. They were observed 392 days.

Results: The transplants remained visible for 8 days. Three became necrotic and two formed abscesses. Sections made at autopsy showed masses of necrotic cells and fat. No malignant tumor occurred in any of the other mammary glands.

B. In this group of five lactating mice, a piece of mammary gland tissue, plus the nipple, was transplanted to the abdomen 15 days postpartum. The nipple was allowed to protrude from the subcutaneous pocket to which the transplant was made. These mice were mated five days postoperative, and after littering, were again mated. Five postpartum lactating mice were used as controls. Each had three litters. They were observed 180 days. No attempt of any of the mice to suckle from the transplanted nipple was ever observed.

Results: No transplants were visible after the 38th day. Section of the site of the transplant showed only necrotic cells and fat. No malignant tumor occurred in any of the other mammary glands.

Discussion

Since the results in this series of experimental studies vary so widely, it is difficult to relate the factors influencing the growth and ultimate fate of the transplants. The general physical condition of the animal evidently affects its growth, since it was noted that in animals with gastro-intestinal or respiratory disease, the transplant more rapidly decreased in size and on section only necrotic tissue was found. Although only 2 epidermoid cysts occurred in the 22 males used in these experiments, it cannot be concluded that sex determines the success of transplants, because the group is so

small. The site to which the transplant is made is not of great importance as long as there is an adequate blood supply for growth of the graft.

The pregnant and pubescent stages, which are attended by greater growth stimuli, resulted in a greater frequency of viable grafts with cyst formation (See Table). This was also true of the animals in which there had been a sterile coitus. On the other hand, when the physiological activity is least, as in the adult virgin or the postpartum lactating group, the transplant was prone to undergo more rapid necrosis and absorption, with little or no metaplastic change. Successful transplantation, as might be expected, depended to a large extent on the physiological status of the animal at the time the transplant was made. Any metaplastic changes in the transplant occurred in those animals where physiological activity was greatest.

It is interesting to note that in the mice in which only a small piece of mammary gland tissue minus the nipple was transplanted, an epidermoid cyst lined with squamous epithelium formed, while in the mice in which gland tissue plus the nipple was used for transplants, retention cysts lined by cuboidal epithelium developed. In 10 of the 25 adult virgin mice in which the gland plus the nipple was transplanted, and which were mated four days postoperatively, 3 epidermoid cysts developed in the transplants and 5 spontaneous carcinomata developed in mammary glands remote from the site of operation. Our findings are in agreement with those of Fischer in regard to the formation of epidermoid cysts, but we never found any evidence of carcinoma in a transplant of mammary gland tissue. Fischer did not mention the incidence of spontaneous mammary gland carcinoma in the strain of mice used in his experiments. In all but one experiment of the 7 reported in detail, he made two or three transplant operations, that is, he retransplanted a growing transplant several times. Heide-Jorgensen did likewise in an animal reported as having a metastasizing carcinoma after autologous transplant. It would appear, too, that these workers did not prove conclusively whether the tumors described as arising from the transplants actually did result from the original transplant or from normal mammary gland tissue at or near the site of the transplant operation. The distribution of the mammary apparatus is such that there are comparatively few areas free from it. Since these workers transplanted into the cervical region and the flanks in most cases, it would not, in the truest sense, be a transplantation to a site remote from mammary tissue. Both workers also tied a piece of denuded tail (about 0.5 cm. long) of the mouse to the mammary tissue, thus introducing another factor that had no relation to the mammary tissue transplanted, and that may have caused local irritation, thus confusing the results of the transplantation of mammary tissue only.*

Summary

The original object of this study was the experimental production of carcinoma in autologous transplants in albino mice by the injection of carcinogenic substances. A review of the literature on transplantation operations in various animals is given.

Results

1. In a group of 179 female and 22 male Swiss mice of an inbred commercial strain in which autologous mammary gland transplants were made, there was rapid absorption of the transplant (6 to 12 days) in all except 16 (14 female and 2 male) mice.

2. In the entire group of 201 mice, only one transplant showed fairly normal glandular tissue.

3. Twelve epidermoid cysts and three retention cysts (with some recognizable mammary epithelium also) were found in the transplant of 16 animals of the entire group.

4. In the groups of animals in which there was the greatest physiological activity, there was more frequent metaplastic change in the transplant. Thus the greatest frequency of cyst formation was found in the pregnant mice and in the animals in which a sterile coitus had occurred. Epidermoid cysts were also found in the pubescent and prepubescent mice. No cysts occurred in the postpartum lactating mice or in the adult virgin mice in which there had been no postoperative mating.

5. There was no apparent relationship between the number of litters and the frequency of cyst formation.

6. There was no gross or histologic evidence of carcinomatous or sarcomatous tumors in the transplants of the entire group of 201 mice.

I wish to thank Dr. Irving Graef, who suggested this experimental project and under whose supervision the work was done, and Dr. Halsey Bagg for his helpful suggestions and criticism.—Author.

*In another experiment, mammary gland tissue plus a piece of denuded tail of the animal was transplanted and retransplanted as in the method described by Fischer. Twenty pregnant mice were used. All but one transplant had been completely absorbed at the end of 90 days. On examination of this transplant, only degenerating cartilaginous tissue was found.

Bibliography

Bradbury, J. T.: Study of Endocrine Factors Influencing Mammary Development and Secretion in the Mouse. Proc. Soc. Exp. Biol. & Med. *30*: 212, 1932.

Calame, P.: De la greffe du mamelon et de la glande mamaire dans la rat. Lausanne Theses, Instit. Pathol. de Lausanne, 1911.

Cole, H. A.: The Mammary Gland of the Mouse During Estrous Cycles, Pregnancy, and Lactation. Proc. Roy. Soc. London, S.B. *114*: 136, 1933.

Fischer, Albert: The Development of an Epidermoid Cyst in an Autologous Graft of Mammary Tissue. Am. J. Ca. *31*: 491, 1937.

Fischer, Albert: The Theory of the Developmental Physiology of Malignant Tumors. Am. J. Ca. *31*: 491-501, 1937.

Fischer, Albert: Sarcoma Formation in an Autologous Graft of Mammary Tissue. Am. J. Ca., *32*: 549-553, 1938.

Gardner, W. U. Personal Communication to W. O. Nelson: quoted in Endocrine Control of the Mammary Gland. Physiol. Rev. *16*: 491 (July), 1936.

Heide-Jorgensen, Henning: A case of Metastasizing Carcinoma in a Mouse, Produced by Autotransplantation. Am. J. Ca. *31*: 264-268, 1938.

Lewis, A. A., and Turner, C. W.: The Mammogenic Hormones of the Anterior Pituitary. 1. The Duct Growth Factor. Mo. Agr. Exp. Sta. Res. Bull. No. 310. pp. 34-43, 1939.

Nelson, W. O.: Endocrine Control of the Mammary Gland. Physiol. Rev. *16*: 491, 1936.

Polissadowa, X., and Bjeloser, I.: Atypische Epithelwuncherungen in ueberpflantzen Milchdruesengewebe. Virchows Arch. f. Path. Anat. *272*: 759-763,

Polissadowa, X., and Bjeloser, I.: Fate of Transplanted Mammary Gland in the Dog. Vestnik khir. *19*: 352-355, 1930.

Ribbert, H.: Ueber Transplantation von Ovarium Hoden und Mamma. Arch. F. Entwicklngsmechanik. *7*; 688, 1898.

Selye, H.: The Nervous Control of Lactation. Am. J. Physiol. *107*: 535, 1934.

Selye, H., Collip, J. B., and Thomson, D. L.: Nervous and Hormonal Factors in Lactation. Endocrinology *18*: 237-248, 1934.

Selye, H., and McKeown, T: Production of Pseudopregnancy by Mechanical Stimulation of Nipples. Anat. Rec. *60*: 323. Surg. Gynec. & Obst. *59*: 886, 1934.

Turner, C. W., and Gomez, E. T.: The Normal Development of the Mammary Gland of the Male and Female Albino Mouse. Mo. Agr. Exp. Sta. Research Bull. No. 182, 1933.

The Blood Clotting Mechanism *A Review*

AUDRIE LEAH BOBB, M.D.

PART I—Chemical and Clinical Aspects

Since the days of Virchow[1] it has been known that the clotting of blood is intimately related to the response of tissues to injury and to the subsequent healing or death of those tissues. For many years the mechanism by which the clotting is accomplished has presented a baffling problem to investigators who oftentimes issued conflicting reports. During the past two decades, however, great impetus to the correlation of old and new data has followed in the wake of two fields of investigation which have been particularly productive, namely, the contributions growing out of studies of hemorrhagic sweet clover disease of cattle, and the recent progress in isolation of blood proteins and their component fractions. To date, the intricacies of the blood clotting mechanism are still only partially understood, but even this partial knowledge has led to far reaching clinical applications.

Dr. Bobb is Assistant Attending Physician in Peripheral Vascular Disease, Department of Medicine, New York Infirmary

Actually, blood clotting fundamentally consists of two reactions: the cellular reaction, and the deposition of fibrin. The first reaction, which is characterized by agglutination of thrombocytes, is the only defense of certain lower animals against traumatic blood loss. Our interest in this presentation lies in the second or chemical phase of blood clotting.

At the present time the concept of the chemical mechanism of blood coagulation which is best supported by experimental evidence is graphically represented in the accompanying table. It is generally accepted,[2,3] that prothrombin, present in the blood stream, through the enzymic mediation of ionic calcium and thrombokinase, the latter being present in all tissues, is converted into thrombin. The thrombin thus formed, in turn, acts as an enzyme which facilitates the conversion of fibrinogen, present in the blood stream, to fibrin. The trigger which sets off this mechanism is the

A. RELATIONS OF BLOOD CLOTTING FACTORS

Preliminary Reaction:

(Accelerators)
Snake venoms
Trypsin
Thrombokinase plus Calcium

Prothrombin ⟶ *Thrombin*

(Inhibitors)
Heparin-protein complexes
Bile salts
Polysulfonic azo dyes
Cyanides
—SH compounds
Nucleic acids
Protamines
Citrates
Flourides
Oxalates
Phosphates

Clotting Reaction:

(Accelerators)
Snake venoms
Papain
Thrombin

Fibrinogen ⟶ *Fibrin*

(Inhibitors)
Antithrombin
Tissue globulin
Cobra venom
Hirudin

(The principal physiological factors are italicized.)

B. DISTRIBUTION AND SYNONYMS OF CLOTTING FACTORS

In Plasma	In Cells and Platelets	In Clotted Blood
Prothrombin	*Thrombokinase*	*Thrombin*
Prothrombase	Cephalin	Fibrinogenase I
Serozyme	Cytozyme	Thrombase
Thrombinogen	Thrombase	*Fibrin*
Thrombogen	Thromboplastin	
Heparin	Thrombozyme	
Antiprothrombin		
Antithrombokinase		
Calcium ions		
Antithrombin		
Antithrombase		
Fibrinogen		

FACTORS IN THE BLOOD CLOTTING MECHANISM*

Dicoumarol is not listed since its action is indirect and through the suppression of liver formation of prothrombin.

release of thrombokinase (thromboplastin) from traumatized or otherwise damaged tissues or platelets. The fibrin, visible as a network of fibrils, acts as a physicochemical trap which enmeshes cellular elements to form a clot. The integrity of the clot is dependent on the character of the forerunning chemical processes. Its behavior and fate are determined by the extent and type of tissue injury, the accompanying static and hydraulic circulatory phenomena, and the operation of reparative processes.

*Table reproduced from Medical Chemistry, by Mark R. Everett, 1942, through the courtesy of the publishers, Paul B. Hoeber, Inc., New York.

Blood clotting is a physiological process and, as such, may be altered in one or more of three ways: it may be accelerated, decelerated, or inhibited or destroyed altogether. Consideration, therefore, of conditions which may alter the factors involved affords a working approach to functional control and an understanding of pathological deviations.

Prothrombin is a normal blood protein complex present in a concentration of 40 mg. per 100 cc. of plasma. It has been isolated in pure form as a white powder. The very complex molecule is composed of protein and a small amount of carbohydrate. By itself, prothrombin is inert or inactive

just as it is in the normal circulating blood stream. Moist prothrombin spontaneously converts to thrombin in about twenty-four hours. The addition of small amounts of tissue extract (thrombokinase) activates the prothrombin in a few hours. The presence of minute amounts of ionized calcium, however, enormously accelerates the prothrombin-tissue extract conversion and brings the process into the range of usefulness for emergency arrest of hemorrhage.[4,6]

The prothrombin complex has been shown to have at least two components which differ from each other chemically.[6,7] Fraction A designates that portion of prothrombin which disappears when citrated or oxalated plasma or blood is allowed to stand in contact with air, this destruction or inactivation being due largely to oxidation. There is, as yet, no recognized clinical disease in which this fraction is lacking in the blood. Fraction B is that portion of prothrombin which disappears in the animal body when there is a vitamin K deficiency or when excessive doses of dicoumarol are given. Quick postulates that in the circulating blood both factors are joined together with calcium to form a single stable aggregate.

When the blood concentration of the prothrombin complex is reduced to 35 per cent of normal, hemorrhagic tendencies usually develop.[8] Prothrombin is formed by the liver,[9,10,11] and this hepatic function is dependent on the utilization of vitamin K.[12,13] Any condition, therefore, which interferes with either of these processes may produce a hypoprothrombinemia. The numerous clinical observations of decreased prothrombin blood levels thus fall into two main groups: (a) those in which liver function is damaged, or the biliary system is deranged [hepatic poisoning,[9,14] biliary fistulae and obstruction,[15,16,17,18,19] hepatic disease[20]]; and (b) those with disturbances of vitamin K availability, absorption and metabolism [nutritional deficiency,[12] bile salt deficiency,[9,16] extreme diarrhea,[21] sprue,[22,23] ulcerative colitis,[24] intestinal obstruction and polyposis,[22] hemorrhagic disease of the newborn,[25,26] and, in rats, following protracted sulfonamid therapy[27]]. The hypoprothrombinemias resulting from administration of dicoumarol and from salicylate therapy fall in the first group and will be discussed more fully.

The prothrombin deficit associated with severe liver damage is not altered by administration of vitamin K, whereas those deficits resulting from liver dysfunction secondary to biliary tract derangements or vitamin K disturbances can be restored by vitamin therapy, parenteral route often necessary.[28]

It has been shown[29] that a hyperprothrombinemia with increased tendency to blood coagulation exists in certain clinical states. This finding assumes tremendous clinical significance since it makes possible the detection of thrombosing tendencies and renders practicable the prophylactic and early anti-coagulant therapy of thrombo-embolic disease.

Ionic calcium deficiency sufficient to inhibit coagulation is lower than the lowest recorded levels compatible with life.[30] On the other hand, hypercoagulability of the blood occurs after three hours and reaches its maximum in twelve to thirty hours. Repeated doses of parathormone in animals produces a hypercalcemia with increased blood viscosity. Intravascular clotting, however, does not occur until immediately after death.[31] In cases of scleroderma treated with dihydrotachysterol with resultant hypercalcemia between 12 and 15 mg. per cent, no instance of spontaneous intravascular clotting has been observed[32].

The addition of oxalate to blood prevents coagulation through the removal of free calcium ions which react to form insoluble calcium oxalate. The addition of citrate to blood does not precipitate calcium but results in a binding of the calcium with the citrate radical (a calco-citrate) and thus *ionic* calcium is no longer available to the reaction.

Thrombokinase, a lipoprotein closely related chemically to cephalin, has not been prepared in pure form. It is present in all tissues, especially in brain and lung, and particularly in platelets. In combination with calcium it is considered to constitute a proteolytic enzyme, analogous to trypsin, which reacts with prothrombin to form thrombin.[33,34] Crude or crystalline trypsin and proteolytic snake venoms can be substituted for calcium-platelet or calcium-tissue extract mixture in the activation of prothrombin *in vitro.*[35,36] Thrombokinase affects only the velocity of prothrombin conversion and not the quantity of thrombin derived. Clinical entities characterized by thrombokinase deficiency have yet to be described. In hemophilia there is marked stability of the platelets with consequent defective liberation of thrombokinase, but this does not account for the failure of hemophiliac blood to coagulate, since in some forms of purpura although no platelets can be demonstrated, the coagulation time is normal; and furthermore there is no known reason why thrombokinase should not be liberated from other damaged tissues.

Thrombin, a protein, probably a hydrolytic product of prothrombin, is not present in circulating blood and appears only following activation of its precursor prothrombin. It is believed to be a proteolytic enzyme which converts fibrinogen to fibrin.[37,38,39] It may be replaced in the clotting reaction by proteolytic enzymes such as papain

and numerous snake venoms. One part by weight of thrombin is capable of converting 2000 units of fibrinogen to fibrin, but there is no quantitative relationship between the amount of thrombin used and the amount of fibrin formed. Detailed studies of thrombin have led to the belief that as an enzyme it closely resembles rennin in its property to convert a soluble protein (fibrinogen) into an insoluble one (fibrin). That calcium is not necessary for the thrombin-fibrinogen reaction is shown by the fact that oxalated plasma, to which thrombin is added, clots immediately. When thrombin is added to oxalated plasma it disappears almost completely from the fluid within a few minutes after the occurrence of coagulation, is absorbed on the fibrin, and may be recovered from the clot with sodium chloride solution. If large amounts of thrombin are injected intravenously in experimental animals (3 mg. into a 2 kg. rabbit) death occurs immediately from intravascular clotting.

Although thrombin was prepared in relatively pure form by Mellanby[40] in 1933, only recently following the development of a new process for isolation from beef blood[41,42] has its clinical use become practicable. Thrombin is now available in highly purified form as a powder and is being widely used as a local hemostatic to control delayed, postoperative bleeding or bleeding incident to drainage, excision, or debridement,[43] in plastic and traumatic surgery,[44] as a "suture" in producing rapid adhesion of wound surfaces,[45] in transurethral prostatic resections,[46] in neurosurgery,[47] and in controlling hemophiliac bleeding.[45]

There are *antithrombins*. A natural antithrombin can be demonstrated in the circulating blood.[49] Hirudin, a proteose obtained from salivary glands of the leech, in addition to its antikinase action, neutralizes the action of thrombin *in vivo* and *in vitro*.[50,51,52] The injection of peptone intravenously in a fasting experimental animal produces among other effects an incoagulable condition of the blood, probably through the formation of excessive amounts of antithrombin.[52]

Fibrinogen, a globulin type of protein with special solubilities, is formed by the liver which maintains a concentration in the blood of 0.2 to 0.3 mg. per cent. In severe hepatic damage this value becomes lowered.[54] Instances of congenital lack of fibrinogen have been recorded.[55,56] Blood fibrinogen values of 0.8 gram or more are frequently encountered clinically, and in association with infection constitute a definite hazard toward thrombosis.[57] "The conversion of fibrinogen from the physical state of a disperse hydrosol to a quasi-crystalline fibrin gel is the *sine qua non* of natural blood clotting."[55]

(*Part II*—THE CLINICAL ANTICOAGULANTS will appear in the next issue.)

BIBLIOGRAPHY

[1]Virchow, R.: Beitr. z. Exper. u. Physiol. 2:1, 1846.

[2]Wright, S.: Applied Physiology, Oxford Univ. Press, New York, 1940.

[3]Best, C. H., and Taylor, N. B.: The Physiological Basis of Medical Practice, Williams and Wilkins, Baltimore, 1943.

[4]Seegers, W. H., Loomis, E. C., and Vandenbelt, J. M.: Proc. Soc. Exper. Biol. & Med. *56*:70, 1944.

[5]Mellanby, J.: Proc. Roy. Soc., Series B, *107*:271, 1931.

[6]Quick, A. J.: Am. J. Physiol. *140*:212, 1943.

[7]Oneal, J., and Lam, C. R.: Am. J. Med. Sc. *210*:181, 1945.

[8]Smith, H. P., Warner, E. D., and Brinkhous, K. M.: J. Exper. Med. *66*:801, 1937.

[9]Andrus, W. DeW., Lord, J. W., Jr., and Moore, R. A.: Surgery, *6*:899, 1939.

[10]Andrus, W. DeW., Lord, J. W., Jr., and Kauer, J. T.: Science *91*:48, 1940.

[11]Andrus, W. DeW.: Bull. N. Y. Acad. Med. *17*: 116, 1941.

[12]Almquist, H. J., Pentler, C. F., and Mecchi, F.: Proc. Soc. Exper. Biol. & Med. *38*: 336, 1938.

[13]Dam, H., and Glavind, J., Ztsch. f. Vitaminforsch: *9*:71, 1939.

[14]Bollman, J. L., Butt, H. R., and Snell, A. M.: J.A. M.A. *115*:1087, 1940.

[15]Brinkhous, K. M., Smith, H. P., and Warner, E. D.: Am. J. M. Sc. *50*:196, 1938.

[16]Smith, H. P., Warner, E. D., Brinkhous, K. M., and Seegers, W. H.: J. Exper. Med. *67*:911, 1938.

[17]Butt, H. R., Snell, A. M., and Osterberg, A. E.: Proc. Staff Meet. Mayo Clinic, *14*:407, 1939.

[18]Koller, F., and Wuhrmann, F.: Klin. Wchnschr., *18*: 1058, 1939.

[19]Stewart, J. D.: Ann. Surg. *109*:588, 1939.

[20]Pohle, F. J., and Stewart, J. D.: J. Clin. Investigation, *19*:365, 1940.

[21]Warner, E. D., Spies, T. D., and Owen, C. A.: South. Med. J. *34*:161, 1941.

[22]Clark, R. L., Jr., Dixon, C. F., Butt, H. R., and Snell, A. M.: Proc. Staff Meet. Mayo Clinic *14*:407, 1939.

[23]Hult, H.: Nord. Med. *3*:2428, 1939.

[24]Page, R. C., and Berkowitz, Z.: Am. J. Digest. Dis. *9*:419, 1942.

[25]Waddell, W. W., Jr., Guerry, DuP., III, and Birdsong, McL.: South. Med. J. *33*:974, 1940.

[26]Quick, A. J., and Grossman, A. M.: Am. J. Med. Sc. *199*:1, 1940.

[27]Black, S., Overman, R. S., Elvejehm, C. A., and Link, K. P.: J. Biol. Chem. *145*:137, 1942.

[28]Allen, J. G., and Julian, O: Arch. Surg. *41*:1363, 1940.

[29]Shapiro, S.: Exper. Med. and Surg. *2*:103, 1944.

[30]Crane, M. M., and Sanford, H. N.: Am. J. Physiol. *118*:703, 1937.

[31]Cantarow, A., Caven, W. R., and Gordon, B.: Arch. Int. Med. *38*:502, 1926.

[32]Duryee, A. W.: Personal Communication.

[33]Eagle, H., Medicine, *16*:95, 1937.

[34]Eagle, H.: J. Gen. Physiol. *18*:531, 1934-35.

[35]Eagle, H., and Harris, T.: J. Gen. Physiol. *20*:543, 1937.

[36]Eagle, H.: J. Exper. Med. *65*:613, 1937.
[37]Schmidt, A.: Weitere Beiträge zur Bluthlehre, Bergmann, Wiesbaden, 1895.
[38]Schmidt, A.: Zur Blutlehre, Vogel, Leipzig, 1893.
[39]Eagle, H.: J. Gen. Physiol. *18*:547, 1935.
[40]Mellanby, J.: Proc. Roy. Soc., Series B, *113*:93, 1933.
[41]Seegers, W. H., Smith, H. P., Warner, E. D., and Brinkhous, K. M.: J. Biol. Chem. *123*:751, 1938.
[42]Seegers, W. H., Brinkhous, K. M., Smith, H. P., and Warner, E. D.: J. Biol. Chem. *126*:91, 1938.
[43]Tedrick, R. T., Seegers, W. H., and Warner, E. D.: Surgery *14*:191, 1943.
[44]Kudryashov, V. A.: Am. Rev. Soviet Med. *2*:243, 1945.
[45]Young, F., and Favata, B. V.: War Med. *6*:80, 1944.
[46]O'Conor, V. J.: J. Urol. *53*:584, 1945.
[47]Putnam, T. J.: Ann. Surg. *118*:127, 1943.
[48]Smith, H. P.: Prothrombin and Thrombin, in Moulton, F. R., ed., Blood, Heart and Circulation, Science Press Printing Co., Lancaster, 1940.
[49]Seegers, W. H., and Smith, H. P.: Proc. Soc. Exper. Biol. & Med. *52*:159, 1943.
[50]Mellanby, J.: J. Physiol. *38*:495, 1909.
[51]Barratt, J. O. W.: Brit. J. Exper. Path. *7*:127, 1926.
[52]Barratt, J. O. W.: J. Physiol. *64*:47, 1927.
[53]Everett, M. R.: Medical Biochemistry, Paul B. Hoeber, Inc., New York, 1942.
[54]Cantarow, A., and Trumper, M.: Clinical Biochemistry, W. B. Saunders Co., Philadelphia, 1945.
[55]Rabe, F., and Salomon, E.: Deutsch. Arch. f. Klin. Med. *132*:240, 1920.
[56]Henderson, J. L., Donaldson, G. M. M., and Scarborough, H.: Quart. J. Med. *14*:101, 1945.
[57]Bancroft, F. W., Stanley-Brown, M., and Chargaff, E.: Ann. Surg. *106*:868, 1937.
[58]Prandoni, A., and Wright, I. S.: Bull. N. Y. Acad. Med. *18*:435, 1942.

Importance of Co-operation Between Physician and Dentist

ANNA P. BOUDIN, D.D.S.

DENTISTRY TODAY IS not an isolated profession, a mere mechanical craft replacing lost tooth structure with metal or plastic materials or making restorations of lost teeth.

The mouth with its structure is as much a part of the human body as the circulatory, the respiratory, and the cardiovascular systems. None of these can be pathologically or therapeutically isolated and treated as a separate entity without regard to its relationship to the rest of the body. And the dentist is no more an isolated practitioner than is the ophthalmologist, the gynecologist, the surgeon, the internist, or the psychiatrist. The dentist needs the co-operation of the physician today more than ever, since it has been conclusively established that many symptoms of organic derangement manifest themselves in the dental structures. The practitioners of other branches of medicine need the co-operation of the dentist no less.

Focal infections in the teeth throw their deleterious products into the circulation, and these are distributed to such far away parts as the joints, the gastro-intestinal canal, and the cardiac and renal systems. In such cases the internist alone cannot possibly be effective; the co-operation of the dentist is needed to clear up the sources of trouble. On the other hand, the dentist is frequently confronted with mouth symptoms which are not primarily dental problems, but are symptoms of blood dyscrasias, such as leukemia, purpura, hemophilia, and agranulocytosis. Impacted teeth may through pressure give rise to neuralgia. Maxillary sinusitis is frequently the result of the extension of infection from upper bicuspids and molars.

Dr. Boudin is Director, Division of Dental Clinics, Department of Surgery and Gynecology, New York Infirmary

As it is now usual, at least among the better situated social groups, to consult a dentist periodically, once or twice a year, the dentist is perhaps in a better position to detect conditions belonging to other branches of medicine than is the physician. On such visits the dentist might well inspect and palpate the tongue, the floor of the mouth, the gums, the palate, the cheeks. Such examinations will often give the dentist the first chance to detect early manifestations of cancer, for instance. Some symptoms of early cancer of the oral cavity often suggest to the layman that there may be trouble with the teeth, and it is natural for him in such a case to consult a dentist. If the dentist makes a proper examination he will be led to suspect cancer and will put the patient under the care of a physician. This may well save the life of the patient. The same can be said for the early diagnosis of syphilis, tuberculous ulcers, leukoplakia,

and avitaminosis caused by dietary deficiencies, especially of vitamin B complex.

In the proper diagnosis of conditions in the mouth, the following must be taken into consideration: (1) the history; (2) X-ray films; (3) laboratory reports; (4) mucous membrane; (5) investing tissues; (6) upper and lower jaws; (7) hypoplasia; (8) erosion; (9) abrasion; (10) occlusion; (11) gingival and subgingival deposits; (12) bone absorption; (13) sinuses; (14) restorative dental work, if any; (15) general cleanliness; (16) Lactobacillus acidophilus content of saliva.

Psychiatry and psychotherapy are coming to play an ever greater role in medicine. This also concerns the dentist. Psychosomatic aspects of oral pain in the maxillary region are often cured under psychoanalytic treatment. Glossodynia is a psychoneurotic manifestation. Emotional strain may cause trigeminal neuralgia. Dentistry, if it is to fulfill its obligation as a health service, must be prepared to recognize the possibilities of a psychic as well as of a physical or physiochemical etiology in dental disturbances. On the other hand, the psychiatrist must recognize the fact that a neurosis may be the result of dental abnormalities.

In cases of mouth lesions, results of inestimable value can be obtained by close co-operation between the physician and the dentist in each particular case. The physician should have a complete awareness of the patient's oral condition, to enable him to prescribe the proper diets and vitamin therapy. It is the dentist's province to assure correct dental hygiene and to take proper restorative measures. It is my conviction that only by close association can the optimum results be obtained.

The future of the profession of dentistry as a vital health service lies in closer co-operation between physician and dentist.

Child Guidance and Mother Guidance

SELINA SCHRYVER, M.D.

Director, Child Guidance Clinic, Pediatric Department, New York Infirmary, New York

IN CHILD GUIDANCE the relationship between parents and psychiatrist is of the greatest importance. It is essential that there be understanding of the reactions of the child to the other members of his family and especially to his mother. Information about these reactions can usually be obtained only if the mother has confidence in the psychiatrist. In talking with the mother about the past history of the child the psychiatrist has an excellent opportunity to study the mother herself and her way of handling the child. At the same time the mother will learn that the psychiatrist is sympathetic and understanding and that there is no need to be ashamed of any mistakes she may have made in handling her child.

Seeing the mother and child together a few times gives the psychiatrist additional information about the child-mother relationship. Some children are in the habit of clinging to their mothers or of asking constantly for help and approval. In some instances their dependent behavior is caused by a need for more attention. Other children, acting as little tyrants, use their dependency to dominate the mother's life.

The psychiatrist must have an understanding of the parents in order to understand the child. In the lives of most children difficulties arise which have their origin in the relationship of the child to parents and to siblings. It is necessary to remember that behavior disorders of children have their roots not only in the personality of the child itself. The child's behavior is in many ways influenced by the personality of the parents. There is either a contrary reaction to the parents' attitudes, or there is an imitation of these. In many instances there is a combination of both.

Overprotection by the parents may cause dependency and lack of self-confidence or may result in disobedience and antagonism. Parental nagging, an overcritical, overcorrective attitude, may cause self-consciousness and fearfulness in the child. Problems in the home are seen, as in a mirror, in the personality of the child. He is sensitive to everything that goes on around him.

The relationship which the parents work out with their child is often based on their own childhood and their relationship with their own parents. Bringing a child for psychiatric guidance implies that the parents are willing to change their attitudes towards the child.

It is a precarious job to explain to them in what respect their feelings and reactions need to be

changed. They have to be made ready to accept the criticism that is implied. They will be better able to accept advice if they understand what psychiatric guidance means and if they are informed about what is going on in a psychiatric session. They, as much as the child, need to be prepared for the acceptance of psychiatric guidance. The best results from child psychotherapy are obtained if the parents' attitude shows their confidence in the treatment. This is the most important help expected from them. They should not try to give more active assistance. They must leave to the psychiatrist himself the building up of a relationship with the child. Even for those children who refuse contact and who are hostile it should be left to the therapist to work out the best approach. In the same way, the parents should abstain from questioning the child about what is going on between him and the psychiatrist.

Too active interest on the part of the parents may interfere with new attitudes which the child is trying out in the psychiatric session. The child needs leisure and time to assimilate thoughts and feelings that come to the surface under the influence of the psychiatric treatment. The psychiatrist is working for a better relationship between child and parents. The results will be better if the parents will have the patience to wait.

In the New York Infirmary we feel that preparation of the parents for Child Guidance can well be done by the social case worker. She acts as intermediary. Before the treatment starts she explains to the mother what the treatment is going to do for the child and the family. She gives information about how the treatment is carried on, and she reassures the mother who fears that the psychiatrist may estrange the child from her. Later, she works with the mother while the psychiatrist works with the child; or the parts may be reversed, the social worker treating the child, the psychiatrist treating the mother. The all important factor is that both parents and child progress in the same direction. In the psychiatric sessions the child learns to give up inhibitions, to accept new satisfactions, and not to fear mistakes and failures. He learns how to accept others and that he himself is accepted.

At the same time, the parents must be taught that they must accept the child with his own limitations, that the causes for his shortcomings should be explored, and that it is their task to make the child feel secure in his parents' love and sympathy, even though he may not live up to their expectations.

Child Guidance implies Mother Guidance.

The Treatment of Clubfeet

ISABEL BITTINGER, M.D.

Attending Surgeon in Orthopedics, Department of Surgery, New York Infirmary

ALTHOUGH MANY DIFFERENT methods have been used on individual patients, a summary of the routine method employed for the treatment of clubfeet at the New York Infirmary and at the Hospital for Special Surgery, New York, may be of interest.

Clubfeet include congenital deformities of the feet. The most usual is equinovarus; the next most frequent is calcaneovalgus. The deformity may be severe or mild. Absence of bones of the foot or leg is an occasional complication.

The age at which the patient is first seen is important. The younger ones, up to three months of age, with pliable feet do nicely; while with older children and adults the results are apt to be less satisfactory. We like to start treatment as soon as the infant is gaining weight and the mother is strong enough to bring it into us regularly.

On the first visit we try to estimate the prognosis in each case. This seems to depend not so much on the degree of deformity as on the stiffness of the foot. Feet which are stiff, either from idiopathic stiffness or as the result of previous manipulation or operation, give the poorest prognosis. When there is absence of bones of the foot or leg, also, the prognosis is not good.

Equinovarus feet are treated by multiple changes of corrective plaster, once a week up to five months of age and once in two weeks thereafter. This is continued until complete overcorrection is obtained, the condition being checked by x-ray.

When the feet are completely overcorrected, we put the infant into Dennis-Brown shoes to be worn all the time until walking begins. After this they are to be worn as night shoes. Most of the feet corrected in this manner, with the correction maintained with the Dennis-Brown shoes, do not show recurrence. They must, however, be watched carefully, particularly during the periods of most rapid growth, which is the time when the deformity is most likely to recur. When these feet do show recurrence the infant is immediately put back into corrective plasters and the foot overcorrected as before. When the growth period is over, the deformity is not likely to recur. For this reason we like to follow our children until they are about sixteen years of age. A careful analysis of our cases showed that the feet in which the deformity recurred fell into one or two main categories: those which were not completely overcorrected in the beginning, and those which were very stiff at the initiation of treatment.

The type of congenital stiff clubfoot in which there may be an element of arthrogryposis, particularly those with a crease across the plantar surface, is resistant to treatment. Recurrent deformities following manipulation or operation also fall into this group. We have been using Dennis-Brown splints with some success on these patients. The rational for this is that the continual motion obtained with the Dennis-Brown splint should aid in limbering the stiff joints of the foot. Our results with this group of feet have been very disappointing. If complete overcorrection can be obtained with this group of stiff feet, they seldom recur at an older age group.

In older children, three to seven years, we attempt correction with casts as is done with the infants. Most of the deformities in the three to seven year old group of equinovarus feet are quite stiff with considerable Achilles tendon shortening; probably because it was not possible to do a complete correction originally because of stiffness, or because the stiffness was secondary to previous manipulation. Following plaster correction many of these feet do nicely.

When these feet are re-corrected, we sometimes use shoe wedges with clubfoot plates to aid in maintaining correction. Many of these children wear Dennis-Brown night shoes until the age of seven or eight years. This seems to help prevent recurrences and to keep the mother foot-conscious, so that she will bring the infant back for follow-up visits. In the age group from two to seven years the feet can be corrected by operation if the deformity is severe enough to warrant it. Our experience with the operation of soft tissue stripping in this age group has been disappointing in that the deformity seems to recur a year or two years postoperative, and that the feet are often stiff secondary to the operative trauma. An Achilles tendon lengthening can be done at this time, but this is rather unwise if further plaster correction is contemplated, as lengthening the Achilles tendon loses the leverage on the hind foot when the forefoot is pushed into correction. A less drastic procedure for feet which cannot be brought into correction by plaster is manipulation under anesthesia, repeated two or three times at monthly intervals, and the reapplication of corrective plaster. We have found the above method indicated in certain cases of stubborn stiff feet. On the whole, however, our feeling has been against operation for this age group unless it is absolutely essential. The older age group, from seven years on, is amenable to treatment with a subastragalar arthrodesis. We prefer to wait until the child has a bone age of at least nine years before attempting this procedure. A subastraglar arthrodesis done at an optimal bone age gives a good useful foot for a long period of time. It seems that the recurrent clubfeet which do not respond to conservative treatment with multiple changes of plaster get the best results and most useful feet following a subastragalar arthrodesis. We have used this treatment on adults who have never had previous treatment and have obtained excellent results.

The calcaneovalgus group is treated either with corrective plasters or with Dennis-Brown shoes reversed, depending on the severity The severe calcaneovalgus feet are treated with corrective plasters, changed frequently for a few months, and the feet then held with Dennis-Brown shoes reversed until the infant is of walking age. The gradations between true calcaneovalgus foot and congenital flatfoot are treated with Dennis-Brown shoes, reversed from the beginning, with considerable success. As with the equinovarus type of foot, the stiffness of the foot itself at the initiation of treatment is important in the prognosis as the pliable feet do much better than the stiff ones.

Our results in terms of serviceable feet have been very good. The few feet which turned out badly were attributable to a lack of follow-up, and the return of the patient to the clinic only when the deformity became so severe that he could not walk. Our results depend upon starting the correction at as early an age as possible, overcorrecting the foot, and maintaining that correction with frequent return visits for check-up and further treatment if necessary until the child finishes his growth period.

In the accelerated research activities of the past few years, a number of new drugs and therapeutic procedures have been evolved. This symposium represents a critical analysis by specialists in the respective fields of the value, indications, and potentialities of these recent additions to therapeutics.

Symposium on Recent Advances in Therapy

Prepared by THE ATTENDING STAFF OF THE NEW YORK INFIRMARY *and Edited by* LEONORA ANDERSEN, M.D.

STREPTOMYCIN THERAPY IN TUBERCULOSIS

Alice D. Weber, M.D.

STREPTOMYCIN was first described in 1944 by Schatz, Bugie, and Wakesman of Rutgers University. It is an antibiotic substance produced by cultures of a member of the Actinomyces group. In December, 1944, Hinshaw and Feldman reported that it had a suppressive effect in controlling experimental tuberculosis in guinea pigs.

Hinshaw and associates at the Mayo Clinic treated a hundred cases of tuberculosis with streptomycin during the last two years. Among these were thirty cases of far advanced and moderately advanced pulmonary tuberculosis. They found the results encouraging. There was roentgenographic and clinical improvement in twenty-five cases, in spite of unfavorable trends prior to treatment. In six patients, thick walled cavities persisted in spite of treatment. Tubercle bacilli disappeared in the sputum of thirteen. In six, there was reactivation of the disease after discontinuation of treatment with streptomycin. It appears that the persistence of tubercle bacilli in the sputum, uncollapsed cavities, emaciation, and low natural resistance predisposed patients to a recurrence of the disease after discontinuing the treatment.

The Hinshaw group at the Mayo Clinic reported also seven cases of tuberculous ulcerating lesions of the respiratory tract which they treated with streptomycin by the intramuscular route and the aerosol method. For the latter 20 cc. of isotonic solution of sodium chloride containing 0.5 gm. of streptomycin is used; 2 cc. is nebulized into the mouth every hour for ten hours of the day. Five patients improved promptly. There was no recurrence in four although the treatment has been completed more than one year.

Among the hundred cases of tuberculosis were twelve in the category of miliary tuberculosis and tuberculous meningitis. Six of these patients have died. Five are still living and under observation from two to ten months. One patient with miliary tuberculosis has improved clinically and roentgenographically in two months; four with tuberculous meningitis (tubercle bacilli demonstrated in the spinal fluid) have improved in one to two weeks. Temperature became normal in four to eight weeks. There was a sense of well being and disappearance of stupor, headache, and neck rigidity. However, some abnormalities have persisted in all patients. None can be called cured. Three of the arrested tuberculous meningitis cases have nerve disturbance: one is blind, due to retrobulbar neuritis, another is deaf. This is questionably due to streptomycin. In the third there is disturbance of cerebellar function. The fourth is ambulatory and well, but is still receiving treatment five months after admission.

Tuberculous empyema, Hinshaw found, improved only when ribs were resected and streptomycin was applied to the pleural surface with an atomizer several times daily as well as by intramuscular route. They also found that tuberculous fistulas showed improvement. They have healed and remained healed from four to twelve months.

One patient with tuberculosis of the pericardium at the Municipal Sanatorium at Otisville, New

York, is at present receiving intrapericardial as well as intramuscular treatment with streptomycin. After four weeks of treatment there has been a noticeable drop in the temperature and a return of appetite.

Streptomycin has to be given in doses of one to three grams daily over a period of two to four or more months. Toxic manifestations should be anticipated in the majority of patients who receive the treatment a prolonged period of time. Disturbance of equilibrium is especially likely to occur and may persist several weeks or months after the discontinuation of streptomycin therapy. It is not a substitute for the present accepted and effective sanatorium treatment of today, nor should it be given to those patients making satisfactory progress.

THE TREATMENT OF MACROCYTIC ANEMIA

Adelaide Romaine, M.D.

THE TERM MACROCYTIC anemia must necessarily include not only pernicious anemia, but those anemias due to various other factors which produce a similar blood picture. This condition may exist in severe nutritional disturbances, in sprue, in chronic liver disease, in pregnancy, and in hemorrhage. The differential diagnosis is based on the patient's history, whether there are signs of posterolateral column degeneration, clinical signs of pellagra, the absence or presence of free gastric HCl after histamine injection, and various laboratory studies such as hematocrit, reticulocyte count, icteric index. One should also include the examination of feces for occult blood, sternal bone marrow puncture, and a gastro-intestinal series. Liver function tests should be done if jaundice exists. It might be said that the wisest procedure to follow in severe cases is to treat them first as for pernicious anemia while the cause is being investigated.

The inauguration of liver therapy in 1926 by Minot and Murphy marked the first really effective treatment of pernicious anemia. Victims could for the first time maintain themselves at a satisfactory level instead of the dread cycle of remissions and relapses, transfusions, and forced feedings, with the trend ever progressively downward. Liver extract parentally administered has remained the method of choice since. This is supplemented by ferrous preparations (orally and parentally) when there is a loss of hemoglobin due to bleeding, pregnancy, or a growth; or by chemotherapy when infection co-exists. Transfusion of whole blood or red blood cells is a time honored and valuable procedure in serious cases.

In 1945, a synthetic product was utilized for the first time in the treatment of macrocytic anemia. A group of doctors from the University of Cincinnati inaugurated the use of folic acid, and since then several other groups have reported cases. There seems to be a general agreement that this treatment is effective in producing erythrogenesis in any type of macrocytic anemia, and that it is equally effective regardless of the route of administration. It has no effect on aplastic anemia, leukemia, or iron deficiency states. So far there is no satisfactory evidence as to whether it will prevent neurological manifestations. Paresthesias which already exist are not affected by it. The dosage varies widely, from 10 mg. to 400 mg. having been given daily. Equally good results have been obtained from small doses.

Folic acid gives promise of being a most valuable drug in treatment of macrocytic anemia, although no more effective than liver extract. We shall not know its full value or whether it can be used to maintain the blood level in pernicious anemia until considerably more study has been made of its use.

LOCAL HEMOSTATIC AGENTS

Frances H. Bogatko, M.D.

For many years various investigators have studied the surgical problem of control of rapid capillary oozing or free venous bleeding where the site of the hemorrhage is unsuitable for hemostasis by ligatures, clips, or electrocolagulation. Thromboplastin has been in use for many years, but has disadvantages. Among newer hemostatic agents are cattle brain extract, thrombol (a colloidal suspension of thromboplastin) thrombin topical, fibrin foam, oxidized and soluble cellulose, gelfoam, and

most recent of all, sodium alignate which is obtained from the extract of brown seaweed. Tidrick reported satisfactory results in the use of thrombin topical, in over 225 surgical cases at the University of Iowa Hospital. Frantz and Lattes of Columbia University, reported good results in the arrest of capillary hemorrhage by the use of oxycellulose gauze; and Putnam used pledgets of soluble cellulose with human thrombin in neurosurgery with equal success.

The various departments of Harvard University reported many studies on local hemostatic agents and concluded that human fibrin foam with thrombin can control bleeding from oozing surfaces, dural sinuses, and large cerebral veins. The fibrin foam with thrombin was used in general surgery on 240 patients and proved effective in controlling oozing surfaces and venous bleeding in a wide variety of cases, including wounds in patients with hemophilia and other blood dyscrasias. Oxycellulose is incompatible with penicillin and like fibrinogen is not sterilizable by current methods of heat and pressure, but requires the formalin method and, therefore, necessitates bacteriologic control. Thus its use is limited.

Gelfoam, a tissue-absorbable sponge made from denatured gelatine, is a light, crisp, glistening, white spongy mass that can be easily cut into any desired shape with a scalpel. It can be moistened in saline or thrombin solution; it is tough and limp so that it adheres readily to tissue surfaces. If buried in tissue it elicits only a minimal cellular response, it is sterilizable, and is antigenic so that there is no danger of sensitivity reactions. When buried in tissue, it disappears in 20 to 40 days depending upon the size of sponge used. In the repair of torn veins where gelfoam has been used no intravascular thrombus formation occurred. It has been used with great success in 24 neurosurgical operations in Borgess Hospital, Kalamazoo, Michigan. Because of its derivation from gelatin it is readily available and less expensive than hemostatic agents made from human blood.

Calcium alginate gauze, made from the extract of brown seaweed, has been found to be very satisfactory in the experimental studies made by Major George Blaine, R.A.M.C., of Sutton, Surrey, England. It is absorbed in tissues, with a minimal cellular reaction, it may be autoclaved, it causes rapid clotting and it has no inhibitory action on penicillin. No clinical observations have been published, but its possibilities for surgical use are promising.

* * *

THE SURGICAL TREATMENT OF ESSENTIAL HYPERTENSION

Mary Lee Edward, M.D.

The diagnosis of essential hypertension includes those cases of hypertension not falling under another classification, e.g., nephritis, adrenal tumors, etc. It is difficult to rule out kidney disease in the early stages.

The symptom for which most patients with hypertension seek relief is headache. The changes evaluated in selecting cases for operation are in the heart, kidneys, eye grounds, and brain. The sodium amytal test is of some help in selecting cases suitable for surgical treatment. If the diastolic pressure fails to fall below 100 after 3 grains every hour for three doses, the results will almost invariably be unsatisfactory. It is useless to operate on patients with congestive heart failure, auricular fibrillation, significant renal insufficiency, or severe hypertensive encephalopathy.

The operation is in two stages, ten days apart, one side being done at a time. It is performed through a lumbar incision. The 11th rib is removed and the diaphragm divided. The sympathetic chain from the 3d thoracic to and including the 2d lumbar is removed, also the ganglia, and the greater, lesser, and least splanchnic nerves.

The results of medical treatment in essential hypertension are only fair. Keith, Wagener, and Barker grade essential malignant hypertension into four groups according to eye ground findings. In the fourth group, with edema of the discs, the prognosis is serious. The life expectancy with medical treatment is 10.5 months. In this group, Hinton and Lord report a mortality of 13 per cent, with significant improvement in 61 per cent following thoracolumbar sympathectomy.

In patients with essential hypertension, as a whole, the improvement in blood pressure, EKG findings, eye grounds, and kidney function are encouraging; but the relief from headaches is the most gratifying feature to the patient.

THE TREATMENT OF SYPHILIS

Helen J. Neave, M.D.

In any modern consideration of the treatment of syphilis, penicillin has occupied the foremost place in the last few years. However, the chief point to be stressed must be the fact that syphilis is an ancient disease of many facets, some of which remain hidden for years, and that any new form of treatment can be evaluated only over the space of years. Added to this is the recent discovery of several varieties of penicillin, some of which are more spirocheticidal than others. Nevertheless, to date, penicillin appears to be the best form of therapy, as regards safety to the patient, final results, and ease of treatment; provided it is given with a thorough comprehension of the disease to be treated and the drug which is being used.

No summary can be expected to cover the entire field and only a brief outline will be given of the treatment of some of the types of syphilis.

Primary seronegative syphilis is the most responsive to penicillin therapy. Originally a total dosage of 1.2 to 2.4 million units of penicillin was considered effective. With longer periods of observation of the patient, and with the increased amount of penicillin K present in the mixture, the dosage advised by different authors has increased. It varies from 40,000 units every two hours for 60 doses (total of 2.4 million units), to 60,000 units every two hours for 90 doses, or 60,000 every three hours for 60 doses, to the recent Army Medical Bulletin order of 100,000 units every three hours for 60 doses, a total of 6.0 million units. Thus the total amount varies from 2.4 million units to 5.4 million units given every two hours for five to seven and a half days, to 3.6 to 6.0 million units given every three hours for seven and a half days. The consensus of opinion favors the longer period of treatment.

When seropositive primary or early secondary syphilis is encountered the percentage of "cures" decreases rather sharply, and the amount of penicillin increases. Here the Committee on Medical Research advises a total dosage of 5.4 million units given in divided doses of 60,000 to 90,000 units every three hours for 90 to 60 doses. The Army advises the 100,000 unit dosage to a total of 8.0 million units in ten days. When relapses occur the patient should be re-treated with a similar or next higher unit dosage given for a minimum of ten days plus arsenoxide therapy. Bismuth may also be given over a period of several months.

The treatment of latent syphilis varies according to the type and must be individualized to the patient. It is in the late latent type that the results have been the most disappointing. Penicillin has seemed to have little or no effect on so-called Wassermann fastness. In cardiovascular disease the reports are discouraging and time of observation is too short. Some of the forms of neurosyphilis respond very well and others do not. In cutaneous forms the outward effect of healing is most satisfactory and frequently faster than in arsenotherapy. Herxheimer reactions must be guarded against in all these latent forms by lowering the initial doses of penicillin and by close observation of the patient.

Truly gratifying have been most of the reports on the treatment of syphilis in pregnant women and the preventing of congenital syphilis in newborns. Goodwin and Moore report no congenital syphilis in infants born of thirty-three mothers treated for *early* syphilis during their initial pregnancy. Most of these patients received a total of 2.4 million units of penicillin over a seven and a half day period. As the initial doses of penicillin should be smaller than usual, starting with 10,000 units every three hours, increasing to 20,000 units before reaching the usual amount of 40,000 units, treatment usually extends to nine or ten days. This regime is advocated so as to offset the danger of reactions and possible abortions. Treatment may be started at any time during the pregnancy and should be repeated in the last trimester of pregnancy, if the titer of the blood Wassermann reaction does not continue to drop. In general, the Wassermann reaction does not become negative by the time of delivery, and may even remain positive for six to twelve months. The usual blood tests, bone x-rays, and routine physical examinations and follow-up schedules are indicated for the infant.

This brief outline is intended as the merest guide in the direction of the more recent work on the treatment of syphilis. Again it must be stressed that all of the penicillin therapy is new and still in its infancy. Dosage is empirical, and in much of this it is experimental and thus subject to frequent changes. The disease is ever present and insidious, but penicillin offers the greatest and safest chance of treatment so far discovered.

THE TREATMENT OF RHEUMATIC FEVER

Valentina P. Wasson, M.D.

In spite of extensive research over many years, no one yet knows for certain what agent causes acute rheumatic fever. But, thanks to the observation of the disease, as well as of tonsillitis and scarlet fever, during epidemics in the training camps during the recent war, evidence is accumulating from clinical and immunological studies which point to the Group A hemolytic streptococcus as implicated in this baffling disease-complex.

The treatment of an acute attack of rheumatic fever is still unsatisfactory, consisting chiefly of prolonged bed rest, salicylates, and even more prolonged convalescent care, not to speak of eternal watchfulness thereafter on the part of the patient's family and doctors. Lately, Coburn advocated massive doses of salicylates given intravenously during eight hours daily, viz., 10 grams in physiological saline, so as to obtain an adequate blood concentration level. His observations led him to think that this form of therapy tends to prevent carditis and helps the return of the sedimentation rate to normal. But other observers are not in agreement with Coburn and point to severe symptoms of salicylism induced by the administration of the drug parenterally in those large amounts. They prefer to give the same dose by mouth every four hours daily, especially when combined with an equal amount of sodium bicarbonate, until mild symptoms of salicylism are noticed.

The progress in prophylaxis has made somewhat greater strides. With training camp segregation, it was possible to carry out extensive and well-controlled trials of daily sulfa-drug prophylaxis. The immediate results were encouraging. Streptococcal epidemics were cut short and healthy men developed only few streptococcal infections. However, during the second and third years of daily sulfa-drug prophylaxis severe epidemics of tonsillitis and of scarlet and rheumatic fevers were reported from several camps and were traceable to stubborn sulfa-resistant strains of Group A hemolytic streptococcus.

It is now clear that sulfa-diazine prophylaxis is not safe unless the patient is under close medical supervision. In ambulatory rheumatic cardiac children it has proved disappointing and even dangerous. For it to be safe, it must be accompanied by frequent clinic visits, blood counts, urinalyses, and sulfa-blood-level estimations. Without these checks one cannot guard against undesirable toxic reactions. Penicillin by mouth is now being extensively tried prophylactically, but it is too early to say whether it is useful. At least it is considered safe except in persons who, because of it, produce a serum sickness closely simulating an attack of rheumatic fever. In subacute bacterial endocarditis penicillin has proved of great value, especially in combination with heparin.

* * *

THE PRESENT STATUS OF GOLD THERAPY IN RHEUMATOID ARTHRITIS

Leonora Andersen, M.D.

Practically all rheumatologists use gold in the treatment of rheumatoid arthritis, although the way in which it acts is not understood. All are agreed that the best results are secured in early cases where its effect is sometimes dramatic.

Most workers now use doses smaller than those given a few years ago. It is felt that as good results are attained with less danger of toxic manifestations. The initial dose is usually 10 mg., the next 25 mg., then 50 mg. The 50 mg. dose is continued at weekly intervals until a total of 1 gram has been given. After this, there is a rest period of at least eight weeks, which is followed by another course of injections.

Anyone giving gold injections must bear in mind the toxicity of the drug and watch for early signs of untoward reactions. Oral hygiene is very important and routine urinalyses and blood counts, including platelet counts, must be done at least once in four weeks. As an added safeguard the patient must be questioned very carefully before each injection.

The most common toxic symptom is a generalized pruritus. If treatment is persisted in, an exfoliative dermatitis is likely to develop. Other manifestations of toxicity are tracheal and bronchial irritation, with cough, stomatitis, gastroenteritis, hepatitis, aplastic anemia, agranulocytosis and other blood changes, and kidney damage.

Recent unpublished work indicates that B. A. L. (British Anti Lewisite), used during the war as an antidote to arsenical blister gases, may be effectively used in combating the toxic effects of gold. It has been found helpful in the exfoliative dermatitis caused by anti-syphilitic arsenicals.

THE USE OF ANTICOAGULANTS

Margaret Stanley Brown, M.D.

At the present time anticoagulants are being used more and more commonly in both medicine and surgery. It is, therefore, necessary to become thoroughly conversant with the products available on the market, the proper way of using them and the risks and contraindications. Three forms are obtainable: Heparin for intravenous use, Dicoumarol for oral use, and a more recent product of heparin in Pitkins Menstruum which is given intramuscularly. Dr. Leo Loewe has worked out this last solution, and it is available in limited amounts only.

None of these substances should be used unless a laboratory is available where prothrombin times can be done each day, as it is very easy with anticoagulant therapy to cause hemorrhages. The dosage has to be regulated according to the patient's clotting time. Normal prothrombin time is from 1 to 10 minutes. The time should run 15 to 20 minutes when heparin is being given.

Heparin comes in a solution of 1000 units per cc. Usually a continuous intravenous drip of 1000 cc. saline with 15 to 20 cc. heparin solution added is given at a rate of 20 drops per minute. This takes about 12 to 14 hours, so that 2000 cc. of fluid are used each 24 hours. The full effect is reached in a few hours and the desired level can be maintained as long as desired. The action of the drug stops soon after the infusion is stopped. If hemorrhage occurs the best treatment is to stop the drug and give a transfusion.

Dicoumarol is slower in action, taking 24 to 48 hours to reach its maximum effect. The dose is 200 to 300 mg. the first day, and 100 to 200 mg. daily thereafter, depending on the prothrombin time. It is well to start the patient on heparin intravenously at the same time as the dicoumarol is started. Then after 24 hours the intravenous treatment can be stopped.

The ideal method of treatment is with the Pitkins Menstruum for this can be given intramuscularly and the rate of absorption increased or decreased by applying heat or cold over the area. The average dose is 200 mg. and this is given every 2 to 3 days.

Anticoagulants should never be used in a person who tends to bleed, or in cases of malnutrition, hepatic disease, endocarditis, or bleeding ulcers.

The main factor to be considered in the use of anticoagulants is the patient. No two patients respond alike and each one must be handled individually according to his or her need.

* * *

NEOSTIGMINE (PROSTIGMINE)

Zohora Ismail, M.D.

Renewed interest in the drug physostigmine was aroused when Dr. May Fleming in 1931 demonstrated its remarkable effect in cases of myasthenia gravis. Since then considerable pharmacological study of this drug and the synthetic, but less toxic, alkaloid neostigmine has been made.

The action of neostigmine is believed to be due to its inhibitory effect upon cholinesterase which is found at the parasympathetic nerve endings, myoneural junctions of skeletal and smooth muscle, and in the synapses of the spinal cord. Cholinesterase itself acts as an enzyme causing a hydrolytic splitting of acetylcholine, which is the mediator of nerve impulses to the end organs.

Its toxic effects are usually minimal, if it is used cautiously, and with the knowledge that atropine is an immediate antidote. Abdominal discomfort, caused by increased motility of the colon, may be experienced, as well as nausea and vomiting, occasionally muscular twitching and debility, and vasodilatation.

The ophthalmologists have utilized neostigmine in acute glaucoma as it reduces tension remarkably in a short time and with great relief from pain. Often they are the first to see a case of myasthenia gravis because of lid lag, and there the drug is used for diagnosis as well as therapeusis. In ptosis due to other causes it is of value. Because of its secretory effect it has been used for washing out calculi in the parotid and salivary ducts.

The cardiologists have occasionally found it useful in supraventricular tachycardias, some reporting dramatic results, while others are more cautious in their evaluation, but feel that it does aid in the diagnosis of underlying pathological conditions obscured by tachycardia. It has its maximum effect in about twenty minutes and then gradually wears away.

All along the gastro-intestinal tract there can be found a use for this remarkable drug. Seasickness, heart burn, flatulence, postoperative abdominal distention, ileus, and megacolon have bene-

fitted by its use. This again is because of its parasympathetic action which includes vagal and sacral nerve stimulation. In the latter group one includes its use in bladder atony and also the effectual dilatation (medical) of the ureter for the passage of calculi.

Now to go back to Dr. May Fleming, who presented her findings to the Royal Society in London. Here was an entirely different effect upon fatigued muscles that just refused to move, and upon the injection of a drug the whole outlook of a patient's life was changed. Again, the study of this drug was necessary. This time it was not a parasympathetic effect, but still an anticholesterase one, affecting the release of acetylcholine at the myoneural junctions and causing muscle contraction. Since then it has been tried in many muscular dystrophies, with help in some and not in others. It has had extensive study in anterior poliomyelitis where the effect has been fairly well proved not to be due to inhibition of cholinesterase at the myoneural junctions, but at the neurons in the spinal cord itself, which have been damaged by the polio virus. In polio it helps relax muscle spasm, reduces pain, decreases incoordination, and sometimes increases active muscular contraction.

Beneficial results have been noted in spastic cerebral paralysis, muscular spasm due to bone injury, and Bell's palsy. The study of the drug in this group of disorders is still going on. Possibly its anticurare action may be utilized as an adjunct in the muscular dysfunction of cerebrospinal palsies.

* * *

THE TREATMENT OF TOXEMIAS OF PREGNANCY

Irja E. Widenius, M.D.

The toxemias of pregnancy constitute a group of serious complications in the pregnant woman. A review of the recent literature does not give us any lead for the immediate and conclusive treatment of these conditions.

The early detection of preventable and correctable conditions which contribute to the cause of the various toxemias of pregnancy should be emphasized. Education of the lay and professional population should also be emphasized. Early and adequate prenatal care should be given to every pregnant woman. Evaluation of her vital functions should be made early with a view to correct any abnormalities which are a direct or indirect cause of the large group of toxemias. Eradication of foci of infection should be completed early in pregnancy.

Prompt diagnosis of the various toxemias should be made and immediate active treatment should be instituted. The combination of adequate rest, adequate diet, low sodium chloride intake, and sedation is well known to all of us. The heroic treatment of the fulminating type of toxemias is still based on the older standard methods.

* * *

THE MODERN TREATMENT OF CIRRHOSIS OF THE LIVER

Marion E. Manter, M.D.

Treatment of cirrhosis of the liver in the past was largely symptomatic because of lack of understanding of its cause. There was an almost universal clinical opinion that alcohol was the chief etiological factor, although stimulating foods and infections were considered possible contributing causes.

There has been increasing realization that patients with cirrhosis of the liver have dietary deficiencies, suggesting that it is primarily a nutritional disease. The presence of ascites is usually associated with reduction of the serum proteins, with or without an inversion of the normal albumin-globulin ratio. A relationship has been established between vitamin B and lowered plasma protein with resulting edema. It is probable that the liver deposits excess amounts of fat under unfavorable dietary conditions with resulting fibrosis and atrophy.

The present treatment, therefore, includes:

1. Elimination of any known causative factor, if possible.
2. Reduction of the amount of dietary fat available to the liver.

3. A diet providing high calories with high protein and high carbohydrate, but low fat intake.
4. Adequate amounts of fat soluble vitamins A and D, which are not present in large enough amounts in a fat restricted diet.
5. Supplementary vitamins as indicated, especially the vitamin B-complex.

Choline has been used to assist in the mobilization of liver fat, but adequate information on which to base its dosage is not available.

* * *

PRESENT STATUS OF THIOURACIL THERAPY

Catherine M. Angus, M.D.

Opinions vary on the indications for thiouracil therapy in hyperplastic hyperthyroidism all the way from use in every case—to surgery in every case, without preparation with thiouracil.

There seems to be no doubt that thiouracil, given in adequate doses, will reduce the basal metabolic rate in all cases of hyperplastic hyperthyroidism. Unfortunately, however, there are some untoward side reactions which militate against its use in many cases, e.g., leukopenia, agranulocytosis, dermatitis, and fever—to mention a few of the more important ones.

The initial dose for a moderately toxic case varies from 0.4 to 0.6 gm. of thiouracil per day. As the basal metabolic rate falls the dose is decreased until the maintainance dose is reached—usually 0.1 to 0.2 gm. per day. The most undesirable aspect of medical treatment is the length and excessively careful observation required. With the advent of 6-propyl-thiouracil this undesirable feature may be lessened somewhat because it is a less toxic drug and causes less untoward side reactions.

Because thiouracil reduces the basal metabolic rate—so surely and so rapidly—it is a useful preparative drug before surgery, when the gland is to be removed. Such a case usually requires six weeks to reduce the basal metabolic rate to average normal. Iodine is added during the last two weeks of therapy.

In summary, it can be stated that thiouracil is a useful drug in the treatment of hyperplastic hyperthyroidism, and in at least 50 per cent of the cases, causes a lasting remission after prolonged treatment. It is especially useful in (1) carefully selected cases of moderate toxicity, (2) patients who refuse surgery, (3) very toxic patients who are being prepared for surgery, and (4) pregnant patients who can be carried through gestation with minimal risk on 6-propyl-thiouracil.

COLLEGE HEALTH CONFERENCE TO BE HELD IN NEW YORK CITY

Thirty-five leading organizations in health and education will sponsor the Third National Conference on Health in Colleges to be held in New York City, May 7-10, 1947, at the Hotel New Yorker. The first meeting of its kind in more than ten years, the Conference is called to consider new health problems arising during the postwar period. National organizations sponsoring the meeting include the Association of American Colleges, the American Association of Teachers Colleges, the American Student Health Association, the American Association for Health, Physical Education and Recreation, and the National Health Council. Among the speakers will be Jane N. Baldwin, M.D., Vassar College; Ruth E. Fairbank, M.D., Mount Holyoke College; Ruth E. Boynton, M.D., University of Minnesota; and Lucy Morgan, Ph.D., School of Public Health, University of North Carolina.

CASE REPORTS

By the Resident Staff of the New York Infirmary

SURGERY

Carcinoma of the Fundus Arrested for 11 Years

The following case is reported because of the clinical arrest for 11 years of carcinoma of the fundus following a complete hysterectomy and x-ray therapy.

Miss E. S. was first admitted to the New York Infirmary on June 3, 1930, at the age of 40 complaining of lower abdominal pain and menorrhagia. The patient started to have severe lower abdominal pain seven months ago which at first was associated with the onset of the menstrual period, but for the past four months has been constant. Periods have increased in amount and duration for the past six months. There has been no weight loss or intermenstrual bleeding. Examination on admission was essentially negative except for the pelvic examination which revealed a cystic cervix and an irregularly enlarged fundus. The clinical diagnosis was multiple fibromyomata uteri with a degenerating submucous fibroid.

On June 7, 1930, the patient was taken to the operating room. The fundus was slightly larger than normal; left ovary small and sclerotic; right ovary had a small corpus luteum cyst. A supravaginal hysterectomy was done. The pathologist reported early carcinoma of the fundus and advised that the cervix also be removed but that tubes and ovaries might be left. This was done. The pathological report is as follows: "Gross examination shows a moderately enlarged uterus in which the myometrium appears to be diffusely hyperplastic. The endometrium is composed of a polypoid firm growth completely filling the cavity of the uterus and moderately infiltrating the layers of the myometrium. This growth extends to the internal os, but apparently not beyond it. Histological examination shows a malignant adenoma with considerable metaplasia into squamous epithelium. There are several areas of infiltration into the myometrium and a few localized deeply situated foci of tumor growth which suggest a pre-existing adenomyomatous condition of the uterus. Cervix appears to be uninvolved and is the seat of a chronic endocervicitis with many cysts. The localization of the lesion to the uterine endometrium and the very early infiltration of the myometrium, the definite lines of demarcation between the cancer process and the normal myometrium give a favorable prognosis. However, post-operative radiation should be used as a precautionary measure."

The patient was discharged on July 17, 1930, after a stormy convalescence. Pelvic examination revealed a smooth pelvic vault, a palpable left ovary, with no induration or discharge. She received a complete x-ray cycle in 1931.

The patient was closely observed with no change noted in the pelvic findings until 1941 when there was thickening in the right adnexa. The patient was advised to have further radiation which she refused until 1943 when she had profuse vaginal bleeding. In 1943 she received another complete x-ray cycle and the pelvic mass again disappeared.

She was readmitted to the hospital on January 18, 1946, with a profound anemia and complaining of fatigue. Pelvic examination revealed a mass about 10 cm. in diameter filling the vaginal vault and bleeding. On biopsy the mass was reported as "Adenocarcinoma Grade III." The patient was given x-ray therapy.

Ant. pelvic field	1800
Rt. post. sacrosciatic	1800
Lt. post. sacrosciatic	1800
Post. pelvic field	800

followed by 1000 mg. hrs. of radium in the form of 50 mg. ovoids. She was discharged on April 7, 1946, with a mass still involving the entire right side of the pelvis and fixed to the bone. The entire mass was much smaller and did not bleed.

She was readmitted on November 13, 1946, complaining of dyspnea and vaginal spotting of three weeks duration. Pelvic examination showed the vagina to be contracted with roughening of the mucosa. There was a stony-hard mass fixed in the right side of the pelvis. Slight bleeding on examination. There was evidence of pulmonary metastases on x-ray examination. The patient received 500 mg. hrs. of radium as a palliative measure. Numerous blood transfusions had no effect on her hemoglobin which ranged from 30 to 58 per cent. She expired on January 26, 1947.

Autopsy findings: Gross anatomical diagnosis:

1. Recurrent carcinoma of uterus (postoperative) involving terminal ileum, right ureter, and vagina.
2. Metastasis to liver, left lung, and paraortic nodes.
3. Hemorrhage into the ileum.
4. Anemia of all the organs.
5. Hydronephrosis, right.
6. Heart-left ventricle, hypertrophy.
7. Nephrosclerosis, left.

Microscopic report:

Adenocarcinoma, Grade III.

—ELINOR H. SUITOR, M.D.,
Resident in Surgery

MEDICINE

A Case of Hemiplegia Treated With Prostigmine

This is the case of a 44-year-old white woman, who was seen in the medical clinic in July, 1935, because of fatigue, dizziness, paroxysmal tachycardia, dyspnea, and edema of the ankles.

Her blood pressure was 210 systolic and 120 diastolic. The retinal veins were very full and a silver line along the arteries was noted, with slight blurring of the right disk. The heart was rapid with a regular rhythm. The sounds were very loud over the entire precordium. The aortic second sound was somewhat metallic and was greater than the pulmonic second sound. The remainder of the examination was normal. Urinalysis, blood count, and blood chemistry were normal.

She was followed in clinic and it was noted that the blood pressure remained from 180 to 210 systolic and 100 to 130 diastolic. She was given phenobarbital and nitroglycerin to control her symptoms. Repeated electrocardiograms showed no evidence of myocardial disease. Examinations showed little change in cardiac picture or in blood pressure.

Nine months later she was admitted to the hospital because of severe headaches. At that time her heart was slightly enlarged, rhythm was regular, and a systolic murmur was heard at the apex. The aortic second sound was greater than the pulmonic second sound. The lungs were clear. The liver edge was palpable two fingerbreadths below the costal margin. She then had marked sclerosis of the retinal vessels. No hemorrhages were seen. A diagnosis of essential hypertension was made with a secondary diagnosis of fibroma uteri. The blood pressure showed little response to phenobarbital or erythrol tetranitrate medications.

She was again admitted on January 10, 1941, when a left inguinal hernia was repaired under paravertebral block anesthesia. Recovery was uneventful. A supracervical hysterectomy was performed and she was discharged in good condition on February 16, 1941.

She was followed in the clinic, the findings remaining the same until two years later, when a retrograde pyelogram showed bilateral blunting of the kidney calices, bilateral ptosis of the kidneys, and double angulation of the right ureter. A belt was ordered for support.

On September 25, 1944, she reported to the clinic with a history of sudden inability to speak which had occurred the previous evening. This was followed by dizziness and headache. She tried to stand but fell. She was unconscious only a few minutes, and on regaining consciousness she was unable to move her left arm and leg. Her speech improved during the evening but severe right-sided headache developed. She was admitted to the hospital for treatment.

Examination showed a drowsy, rational, white woman with a spastic paralysis of the left side. There was a left facial paralysis of the central type. The tongue deviated to the left. There was slight nuchal rigidity. The left border of the heart was outside the mid-clavicular line. Rhythm was regular, the rate 65, sounds were distant. No murmurs were heard. The blood pressure was 160 systolic and 120 diastolic. The lungs were clear. There was a spastic paralysis of the left arm and leg. The biceps, triceps, patellar, and Achilles reflexes were hyperactive on the left and normal on the right. The abdominal reflexes were absent on the left. The Babinski was inconstant but was occasionally positive on the left.

Laboratory reports were essentially negative except for an occasional hyaline cast.

She improved slowly, complaining of severe headache which was controlled by demerol and codeine. Her blood pressure rose gradually and her headaches subsided. By October 10, the blood pressure had returned to her normal level. On October 13, infra-red, massage, and active and passive exercise were started, and she was allowed to sit up for short periods. Some movement of the left leg was then present. By October 19, she was able to flex her forearm in supination against gravity. She was able to walk, but with flexion of the hip and with dragging of the leg and foot. Improvement continued, especially in walking.

Only slight motion of the left arm was possible. The blood pressure remained about 200 systolic and 100 diastolic. After sodium amytal the pressure fell as low as 140 systolic and 78 diastolic. There were slight progressive sclerotic changes in the eyes.

It was felt at this time that she had progressed as far as she could and that further hospitalization was unnecessary. She was discharged on December 15, to be followed in the clinic. Physiotherapy was continued.

Because of the persistent spasticity and the lack of progress it was decided on February 1, 1946, to try prostigmine intramuscularly twice weekly in the dose of 1 cc. of 1-2000 solution with 1/150 gr. of atropine. This was supplemented with oral doses of prostigmine bromide of 7.5 mg. three times a day. This was followed by marked relaxation of the spastic muscles. Intramuscular injections were promptly increased to three times weekly, and the oral dose was increased to 15 mg. three times a day.

Her general condition remained about the same. On March 12, she remarked that she did not fall as often as she had previous to prostigmine therapy. She walked with greater ease but the arm remained about the same. By May 7, the arm showed some improvement but to a less extent than the leg. Walking was much improved.

She omitted prostigmine for six days and came in for an examination. There was definite recurrence of spasticity of the left arm and leg with some increased difficulty in walking. An injection of 1 cc. of 1-2000 prostigmine with 1/150 gr. of atropine intramuscularly brought marked relaxation in 15 minutes with marked improvement in walking.

In summary, this is the case of a 44-year-old white woman who has been followed at this hospital since 1935 when she had a known severe hypertension. She got along well except for severe headaches until September 24, 1944, when she had a cerebral accident. She recovered but was left with a spastic hemiplegia. She showed considerable improvement on heat, massage, and exercise, but she came to a stationary level. The use of prostigmine caused marked relaxation of the spastic muscles and permitted much easier walking. When the prostigmine was discontinued the spasticity returned. Her general condition and hypertension remain essentially the same. It is planned to continue the prostigmine therapy indefinitely.

—Dorothy B. Chamberlin, M.D.
Resident in Medicine

PEDIATRICS

A Case of Nutritional Anemia

S. C., a 16-months-old white boy, was admitted to the hospital on October 6, 1946, with a two-day history of frequent stools and elevated temperature. He had 6 to 8 bowel movements a day of pasty, foul-smelling, yellow stools. He had never had solid food, but took the bottle well. His weight gain had been very slow.

This baby was a twin; weighed 5 lbs. 9 oz. at birth, normal delivery, breech presentation. The condition at birth was good; there was no asphyxia.

At two weeks of age he was admitted to the hospital for readjustment of formula because of vomiting and was discharged on the fourth day. No disease condition was found. There was no further admission until the present one.

At about 7 months his mother noticed that the child did not gain weight. He refused any solid food and vomited if it was forced on him. He was fed entirely by bottle with pablum, egg yolk, and milk. He received Vi-penta and Viosterol. He had the habit of pulling his hair out every time he was able to grasp any.

On the present admission, the boy appeared acutely and chronically ill. He was extremely pale, with poor muscular tone, and undernourished, though normally developed. He had a large bald spot on his head where he had pulled

out his hair. He cried continuously, his extremities were spastic, and when disturbed he held his legs crossed and in complete extension. He was unable to sit or to stand. Patellar reflexes were increased and there was a bilateral unsustained ankle clonus. He had a distended abdomen. No other conditions were found.

His temperature was 103.4 and his weight 15 lbs. 8 oz. The blood count was: Hemoglobin,

32 per cent; red blood cells, 3,150,000; white blood cells, 14,000; polys, 33 per cent, lymphocytes, 66 per cent. The red blood cells showed marked central pallor, anisocytosis, and polychromatosis. The urine examination was essentially negative: acid, faint trace of albumin, faint trace of sugar; 3 to 5 white blood cells to high power field. The stools showed a normal fat content and Bacillus proteus present in pure culture. The impression on admission was: mental retardation, severe anemia, and possibly an organic lesion causing spasticity.

Course: The child was treated for his diarrhea, given penicillin and transfused. Spinal tap and skull x-ray showed no lesions. A gastro-intestinal series showed nutrition deficiency. After the second transfusion, 6 days after admission, the hemoglobin was 51 per cent; red blood cells, 4,460,000; white blood cells, 21,500; polys, 43, lymphocytes, 54, monocytes, 2, eosinophils, 1. The child became more quiet and less spastic. He refused all spoon feeding during the first two weeks. He received a great deal of attention from the staff and gradually became more interested in his surroundings. On the 18th hospital day he ate a cookie and after that with considerable coaxing he began to eat solid foods with occasional vomiting at first. He was gradually given a high caloric diet with plenty of vitamins.

The hemoglobin increased steadily, the child began to gain weight, he became more and more friendly and would laugh and play. If put in a sitting position he remained erect, but he was still unable to sit or stand alone, and his coordination was poor. He was no longer irritable but his temper tantrums occurred when he was annoyed.

On discharge, December 17, 1946, his weight was 18 lbs. 2 oz. The blood count was: Hemoglobin, 75 per cent; red blood cells, 4,050,000, large, some showing moderate central pallor, others well filled; moderate anisocytosis. Otherwise, though he was still underweight, his physical condition was markedly improved.

He was considered a severe nutritional anemia with accompanying and evolutional change. His condition was due to his mother's ignorance in leaving him on the bottle entirely with a low caloric, low vitamin, low mineral diet. His twin sister's condition was similar, though much less marked. She also refused solid food, but much more quietly learned to accept it.

—CATHERINE LODYJENSKY, M.D.
Resident in Pediatrics

OBSTETRICS

A Case of Disseminated Friedlander Infection Occurring in a Post-Operative (Cesarean Section) Patient

A 36 year old woman, colored, Gr. II, Para I, who had a cesarean section for a generally contracted pelvis, 5½ years prior to the present pregnancy, was admitted to the Obstetrical Service, on February 26, 1946, with mild uterine contractions and slight bloody show in the 36th week of pregnancy. The contractions subsided after sedation. It was noted that the patient had a mild upper respiratory infection and frequency of urination. On the second hospital day her evening temperature was 100.2, and she had contractions, which again subsided with sedation. February 28, a low classical cesarean section was performed under spinal anesthesia; 500 cc. of whole blood were given during the operation. Temperature rose almost immediately postoperative to 103°. A few scattered rales were heard at the lung bases. The portable x-ray showed nothing except high diaphragms. The icteric index was 15.6. Urinalysis showed 2 alb., 100 RBC, 15 to 20 WBC, 5 to 6 granular casts. Patient had no complaints although she was coughing and was slightly distended. She was given an enema and 600 cc. amigen intravenously. 30,000 units of penicillin q. 3 h. I.M. were started. A Levine tube was passed into the stomach and allowed to drain out spontaneously, and a gastric lavage was done at intervals. The respiratory rate increased, and 48 hours postoperatively the patient was placed in isolation. The medical consultant did not think that the patient had pneumonia, but felt that the urinary tract should be investigated for the cause of the temperature elevation.

On the 3rd postoperative day, the patient was placed in an oxygen tent because signs consistent with a bilateral lower lobe pneumonia were heard.

On the 4th day a repeat portable x-ray showed no abnormalities except increased markings in the middle of the right lung; however, the diaphragms were still elevated and obscured the lung bases. Despite a moderate soft distention, the Levine tube was removed and the patient ate a soft diet very well. Throat culture on this day showed Friedlander's bacillus. The wound was inspected on the 5th day and appeared clean.

On the 7th postoperative day, the dressing became stained. The wound was again inspected and a draining area at the lower pole was found. Cultures of this material and of the sputum showed a pure culture of Friedlander's bacillus. With the initiation of drainage from the wound the tempera-

ture subsided to approximately 101°. A blood culture taken on this day was sterile after five days.

On the 11th day, a third x-ray showed an area in the right lung resolved, with a density in the left lung not yet resolved.

A lochia culture on the 12th day showed Friedlander's bacillus. 4 grams of sulfadiazine were given followed by 1 gram q 4 h. until the 19th day. The patient continued to improve and the wound drained profusely. Daily dressings and irrigations of the wound with 2 per cent acetic acid were done.

Lochia and wound cultures on the 15th day showed pure cultures of Friedlander's bacillus, but the throat culture on the same day showed mixed organisms with only a few colonies of Friedlander's bacillus still present.

On the 20th day, the patient was sent to the x-ray Department for a chest x-ray, and the film showed almost complete resolution of the process in the right lung with very little residue on the left.

On the 23rd day, the wound culture showed pure Friedlander's bacillus, but the lochia culture was reported as mixed organisms with only a few Friedlander colonies, and the throat showed no Friedlander's bacillus.

On the 26th day, after having been out of bed on the previous day, it was decided to allow the patient to return home and come back to the clinic to have her wound dressed. On her return 3 days after discharge the wound was draining very little, but the left leg was swollen from the toes to the thigh, red, and very tender with pain along the course of the vessels. Her temperature was 100.2°. She stated that she had had some pain the day of her discharge, but told no one because she was afraid that she would be kept in the hospital. She continued to walk at home because she felt that might "take the soreness out." She was admitted immediately to the Medical Service. The Surgical Consultant felt that any type of block therapy was contraindicated because of the organism involved. She was treated for 48 hours with penicillin, 30,000 units I.M. q. 3 h.; heat cradle over legs, and bed rest. After 48 hours, penicillin was discontinued, and 4 grams of sulfadiazine were given, followed by 1 gram q. 4 h. for the next 10 days. At the end of that time the patient was much improved and since she had a normal temperature she was allowed out of bed, without any untoward symptoms. She was discharged from the hospital on her 44th postoperative day with normal temperature, closed wound, and very slight edema of the left leg. At her 6 weeks postpartum examination she was apparently in excellent condition with no residual signs or symptoms.

Summary

36 year old woman, colored, Gr. II, Para I, previously delivered by cesarean section, admitted with a mild upper respiratory infection in mild labor, at 36 weeks' gestation. She was delivered by a low classical cesarean section under spinal anesthesia. Postoperatively the patient had a transfusion reaction, and successively developed Friedlander's pneumonia, wound infection, and uterine infection (due to Friedlander's bacillus), and thrombophlebitis. She was treated with penicillin with questionable results, sulfadiazine, and local irrigations of the wound with 2 per cent acetic acid. The thrombophlebitis was treated with full doses of sulfadizine, rest, and elevation. The organism was first found in the throat, then in the wound, then in the lochia. The order of disappearance of the organism was: throat, lochia, wound.

Final diagnosis: Uterine pregnancy delivered, low classical cesarean section; transfusion reaction, pneumonia due to Friedlander's bacillus, wound infection due to Friedlander's bacillus, endometrial infection due to Friedlander's bacillus; thrombophlebitis, left leg.

—Catherine L. Brewer, M.D.,
Resident in Obstetrics

STRANG CLINIC

A Case of Squamous Cell Carcinoma in a Dermoid Cyst of the Ovary

Introduction

Dermoid cysts or cystic teratomas of the ovary are not uncommon. As far back as 1743, John Astrue[1] reported that "in the ovaries are sometimes discovered hairy tumors, whose explication has intoxicated the brains of several theorists."

Malignant changes in ovarian dermoids have been reported less frequently. The earliest authentic case of a squamous cell carcinoma in a dermoid cyst or cystic teratoma of an ovary is that of Bierman in 1885, reported by Clark in 1898[1]. Williamson and Barris[2], reviewed 32 cases found in the literature, rejected half of them either because the descriptions were inadequate or references were not available, and added 4 cases of their own. Masson and Ochsenhirt[3] tabulated 33 cases, and added 3 cases of their own from the Mayo Clinic. Later Counseller and Wellbrock[4] reported 4 more

cases from the Mayo Clinic, and included three more from the literature. Fein and Hobart[6] added a case of their own and 5 others from the literature. Kent[5] describes 4 such cases; Meikeljohn and Stallworthy[7], and Brody[8] each give a similar instance. In the past sixty years, from 1885 to 1945, the total number does not exceed sixty cases.

In all of the cases reviewed, the dermoid cyst or cystic teratoma in which a squamous cell carcinoma has been found is described as a spherical or irregularly oval mass whose external surface may be discrete in outline, smooth and glistening, or nodular and rough with implants and adhesions. Its size is noted as that of a grapefruit, a coconut, a child's or a man's head, or a fetus of 4 months. The measurements recorded range between 12 cm. and 18 cm. in diameter. One tumor mass weighed 1,570 grams. The color is white, pale blue, yellowish, or brown. In some instances it is adherent to the sigmoid, to the bladder or pelvic wall, or to the omentum, or even to the under surface of the liver, and the anterior abdominal wall. It may be unilocular or it may consist of two or more cystic cavities either partially or completely separated by fibrous septa. Sometimes one cavity is cystic and the other solid. At least one cavity is filled with a fatty or sebaceous substance. Hair is present, either matted in the fatty content or as a ball the size of an apple. It may be attached to the wall of the cyst or separated from it entirely. Some dermoids contain teeth, pieces of bone or cartilage. The wall of the cyst varies from 1 to 4 mm. in thickness. In one portion of the wall, there is a thickening which forms a projection into the cyst cavity. Hair may arise from it or in it teeth and bone may be embedded. This mound has been called by various names: focus, pseudomamma, or plug. It contains the parenchyma of the tumor and is usually yellowish in color. The remainder of the lining is usually parchment-like, smooth, and glistening, except for an occasional wrinkled area, reddish in color. It is within the thickened portion of the wall that the squamous carcinoma arises, spontaneously, with its papilliform structure, cell nests, sebaceous glands, and hair follicles.

Because of the relative rarity of the condition, a detailed report of a case of squamous cell carcinoma in an ovarian dermoid is of interest.

CASE REPORT

Preliminary Examination

The patient was a nulliparous, married woman, thirty-two years of age, of American parentage. Nothing in the past history could be construed as being contributory to the condition. Menses were normal. The obstetrical and surgical history as well as the systemic review were negative. The patient had no pain nor other symptoms. On routine examination, the uterus was found to be small and anterior. On palpation, a mass which filled the cul-de-sac was found to arise in the pelvis and extend about halfway to the umbilicus. This was thought to be an ovarian cyst.

The laboratory report disclosed a normal blood count and blood chemistry. Urinalysis showed a faint trace of albumin; microscopic examination revealed 1 or 2 red blood corpuscles and 5 or 6 white blood corpuscles, per high-power field, with rare clumping.

Surgical Findings

On operation, a considerable amount of bloody fluid was found in the peritoneal cavity. The size of the cyst could be compared to that of a large grapefruit. There were no adhesions nor metastases. The contralateral ovary was normal in size and appearance. Convalescence was smooth; the patient made an uneventful recovery and was discharged on the twelfth postoperative day.

Pathological Findings

Gross descriptions The dermoid cyst was estimated to be about 10 cm. in diameter. It was globular in shape and regular in outline. There was no infiltration through the wall of the cyst, nor were there any surface implants. Externally, the mass was smooth, glistening, and colorless save for a pale blue opalescence in some areas. It was filled with a yellow, fatty, tallow-like mass containing matted hair. The wall was thin except at one pole where it gradually became thicker. This thickened area projected into the cyst cavity. It was composed of locules, some of which contained hair, and a mass of tissue which formed the carcinomatous portion of the tumor. Here there was a yellow discrete area, the surface of which was necrotic and ulcerating, measuring about 2 cm. in its greatest diameter. In the thinner portion of this projecting mass and at the periphery, there was a corpus luteum with its hemorrhagic center. A fully formed canine tooth was found embedded in another portion of the wall adjacent to the tumor.

Microscopic description: The outer layer of the cyst consisted of ovarian stroma which was vascular and infiltrated with lymphocytes. In the area of the "germinal pore" there was an irregular downgrowth of squamous epithelium, producing villiform projections surrounded by connective tissue. There were areas of keratinization, numerous cell

nests with centers of keratin surrounded by concentric rings of cells. Along the border, there was a region of ulceration with necrosis and infiltration of lymphocytes. The tumor cells were flattened, polyhedral, and often showed intercellular bridges. The nuclei were large, showing variations in size and shape. Many were hypochromatic. Mitotic figures were numerous. The surface of the tumor was ulcerated and superficial portions were necrotic. Adjacent to the ulceration, the surface epithelium showed loss of polarity, numerous mitoses, and hyperchromatism. This zone of non-infiltrating carcinoma merged gradually with skin of normal appearance. The remainder of the cyst lining showed the usual structures constituting skin and including hair follicles, sebaceous glands, sweat glands, and apocrine cysts.

Discussion

The incidence of squamous cell carcinoma arising in a dermoid cyst or cystic teratoma of the ovary is given as 0.5 per cent by Martzolff[10] and 5 per cent by Weiner[14]. Between these two variants, Kouchy[12] reports 1 per cent, Counseller and Wellbrock[4] at the Mayo Clinic, 1.7 per cent. Ewing[13] estimates it to be 3 per cent. At the New York Infirmary, between the years 1939 and 1945, the percentage was 3.3 per cent.

In regard to the age of the patients in whom this condition is found, the youngest patient was 19, the oldest 67. About 75 per cent were over 40 years of age.

The prognosis depends on the degree of malignancy, whether the tumor has ruptured or not or is adherent to adjacent structures. In any case, life expectancy is given as two years, (Deaver[11]). Masson and Ochsenhirt[3], however, reported two patients who lived for five and seven years respectively following surgery. Counseller and Wellbrock[4] had heard from one patient who was well fifteen years after operation.

Summary

The spontaneous development of squamous cell carcinoma in a dermoid cyst or cystic teratoma of the ovary is a rare occurrence. Not more than sixty cases have been reported in the literature in the past sixty years. One additional case is herewith described.

In a number of publications, emphasis has been placed upon the necessity for a detailed description of this condition. Williamson and Barris[2] discarded a number of cases in their report because of lack of adequate detail. Masson and Ochsenheit[3] at the Mayo Clinic for similar reasons rejected sixty cases which were thought to be malignant dermoids. Dermoids in which the carcinoma had developed through extension of disease or from metastasis were not accepted.

Because of the fact that in many instances a specimen is not examined microscopically, it is thought that many cases are not recognized. Gross examination alone has been found to be unreliable. Histological examination is essential in order to recognize malignancy and to avoid errors in diagnosis.

Isabella Wakeham, M.D.,
Resident, Kate Depew Strang Cancer Clinic

Bibliography

[1]Clark, J. G.: Carcinoma Developed from the Wall of a Dermoid Cyst of the Ovary. Am. J. Obst., *38*: (Sept.) 1898.
[2]Williamson and Barris: On the Occurrence of Carcinoma in Cystic Teratomata of the Ovary. J. Obst. and Gynec. Brit. Emp., *20*: (Sept.) 1911.
[3]Masson and Ochsenhirt: Squamous Cell Carcinoma Arising in a Dermoid Cyst of the Ovary. Surg. Gynec. & Obst., *48*: (May) 1929.
[4]Counseller and Wellbrock: Squamous Cell Epitheliomas in Dermoid Cyst of the Ovary. Am. J. Obst. & Gynec., *28*: (July) 1934.
[5]Kent, C. F.: Carcinoma of Dermoid Cyst of Ovary. J. Missouri M. Assoc., *33*: (Oct.) 1936.
[6]Fein, M. J., and Hobart, R.: The Occurrence of Squamous Cell Carcinoma in the Lining Epithelium of an Ovarian Dermoid Cyst. Am. J. Clin. Path. *7*: (Sept.) 1937.
[7]Meiklejohn and Stallworthy: Squamous Cell Carcinoma Occurring in Ovarian Dermoid, with Secondary Involvement of Uterus, Fallopian Tube, and Bowel. J. Obst. & Gynec. Brit. Emp. *45*: (Oct.) 1938.
[8]Brody, S.: Dermoid Cyst of the Ovary with Squamous Cell Carcinoma. Am. J. Obst. & Gynec. *41*: (Mar.) 1941.
[9]Gabrilove, J. L.: Carcinoma in Stomach Tissue Within an Ovarian Dermoid. Arch. Path. *31*: (April) 1941.
[10]Martzolff, K. H.: Dermoid Cysts of the Ovary. Bull. Johns Hopkins Hosp., *33*: 1922.
[11]Deaver, J. B.: Carcinoma in an Ovarian Dermoid Cyst. S. Clin. N. Amer., *11*: (Dec.) 1931.
[12]Kouchy, J. D.: Ovarian Dermoids; Study of 100 Consecutive Cases. Ann. Surg., *81*: 1925.
[13]Ewing, James: Neoplastic Diseases.
[14]Wiener, Solomon: A Study of the Complications of Ovarian Tumors. Am. J. Obst., *72*: (Aug.) 1915.

Current Publications of Women in Medicine and in Allied Fields

1. Dowling, H. F., M. D.; Hussey, H. H., M. D.; Hirsh, H. L., M.D.; and **Wilhelm, Frieda,** M.D.
   Penicillin and sulfadiazine, compared with sulfadiazine alone, in the treatment of pneumococcic pneumonia. Ann. Int. Med. *25:* 950-956, Dec. 1946.

(From the Health Department of the District of Columbia, the Gallinger Municipal Hospital, and the Departments of Medicine, the George Washington and Georgetown Universities).

Among 94 patients with typed pneumococcic pneumonia treated with a combination of penicillin and sulfadiazine. there were four (4.3 per cent) deaths. In the alternate group of 94 patients treated with sulfadiazine alone there were nine (9.6 per cent deaths). There was no significant difference in the speed at which the temperature fell or in the development of complications of the pneumonia in the two groups.

A consideration of the available literature and the present study suggest to the authors that penicillin, when added to sulfadiazine for the treatment of pneumococcic pneumonia, is more effective than sulfadiazine alone. Four tables; 6 references.

2. Hardy, L. H., M.D.; **Rand,** Gertrude, Ph.D.; and **Rittler,** M. Catherine, A.B.
   Effect of quality of illumination on the results of the Ishihara test. Arch. Ophth. *36:* 685-699, Dec. 1946.

(From the Knapp Memorial Laboratories, Institute of Ophthalmology, Columbia University College of Physicians and Surgeons).

Although the number of subjects tested was small the authors feel they are justified in concluding that: 1. the performance scores attained by deuteranomalous and deuteranopic subjects is higher than when daylight is used and the responses of protanopic and protanomalous subjects are little affected by change in quality of illumination; 2. a substantial number of deuteranomalous subjects is sufficiently aided in giving normal responses by the incorrect use of tungsten light to take such individuals out of the class of persons with defective color vision when judged by their performances scores; that is, their scores fall within the normal limits established for daylight illumination; 3. there is a decrease in the number of subjects who are correctly classified for type of defective red-green vision when tested under tungsten light, as compared with the number so classified when tested under daylight, and an increase in the number of protanomalous and protanopic subjects who are incorrectly classified.

Authors stress the critical importance of strict observance of correct conditions of illumination observations on the results of testing with soluduring administration of polychromatic tests using test material seen by reflected light. 3 tables; 9 references.

3. **Kuhn,** Hedwig S., M.D.: Emergency nursing care of the eyes in industry.
   Am. J. Nursing *47:* 24-26, Jan. 1947.

(Dr. Kuhn is a member of the Industrial Advisory Committee of the National Society for the Prevention of Blindness, and secretary of the Joint Committee on Industrial Ophthalmology of the American Academy of Ophthalmology and Otolaryngology and the American Medical Association.)

This paper was presented at the Industrial Nurses Institute, February 16, 1946, sponsored by the Industrial Nurses Section, Wisconsin State Nurses Association, in cooperation with the Wisconsin State Board of Health.

The keynote of nursing care of eyes and eye accidents is insistence on the utmost simplicity in all that is done. There should be (1) few items on the eye tray, (2) quiet diplomatic handling of eye cases, (3) rigid preventive measures to avoid infection or further damage, and (4) a much more complete understanding of the many allied phases of industrial eye problems. This requires constant attentiveness to the ever changing picture of industrial eye care.

Author lists basic items for an "eye-table" and a series of **don'ts** in handling eye cases in medical departments.

4. Macfarlane, R. G., M.D. and **Biggs,** Rosemary, M.B.
   Observations on fibrinolysis. Spontaneous activity associated with surgical operations, trauma, etc. Lancet *251:* 862-864, Dec. 14, 1946.

(Dr. Biggs is graduate assistant, department of pathology, Radcliffe Infirmary, Oxford, England).

Fibrinolytic activity was demonstrated by a modified method of Macfarlane, which depends on the fact that dilution favours the dissociation of the normal plasma-antiplasmin (enzyme-inhibitor) complex, so that potential increases in activity not demonstrable in whole blood become apparent.

Authors conclude that fibrinolysis occurs not only after surgical operations but immediately before them in about 50% of the cases. The drugs used for premedication may be responsible for some cases of preoperative fibrinolytic activity. Fear of impending operation appears to cause a further proportion of positive results. Traumatic shock does not seem to be a major factor in determining fibrinolysis. The activation of the proteolytic system of normal blood, almost certainly responsible for the phenomenon of fibrinolysis, may be part of the "alarm reaction" of Selye. One graph; 9 references.

5. **Rhoden, Patricia,** and Sutherland, C.: The chemical nature of allergens: Observations on "protein-free" preparations of egg white, linseed and castor bean.
   M. J. Australia *2:* 662-663, Nov. 9, 1946.

(From the Department of Biochemistry, University of Melbourne).

Recent evidence indicates that all allergens may not be protein in nature. Because of the difficulties of completely isolating proteins(outlined in the paper), it is impossible to make specific claims with regard to the absence of protein. Electrophoretic studies will probably give more precise information.

This paper presents brief chemical and clinical tions obtained by treating aqueous extracts of some allergens with protein precipitants. In this study, egg white, castor bean, and linseed after treatment with several of the classical protein precipitants retained their power to produce marked skin reactions on hypersensitive subjects. However, the authors emphasize that certain proteins (e.g. ovomucoid) are not precipitated by many of the usual protein precipitants. References.

(Number Six Omitted)

7. **Armytage,** Jean: Bacterial endocarditis.
M. J. Australia *2:* 736-740, Nov. 23, 1946.

(Read at a meeting of the New South Wales Branch of the British Medical Association on July 25, 1946.)

This review of bacterial endocarditis brings out the fact that although there is a powerful weapon against the disease there is need for further investigation. To the points stressed by Dr. Halliday—accurate and early diagnosis and the need for prophylaxis in the case of potentially susceptible people—,the author adds the need for more careful study of the causative organism as regards both its accurate identification and its sensitivity to penicillin.

Finally, further investigation of the factors involved in valve susceptibility is still necessary. Penicillin will cure only the inflammatory lesion on the valve, and the patient is left with the result of those vegetations, a deformed valve, impaired cardiac efficiency and perhaps damage to distant organs such as the brain and kidney. Dramatic though penicillin treatment is, prevention is better than cure. Fifteen references.

8. **Jakobowicz,** Rachel, and **Bryce,** Lucy M., B.M.: The effect of cerebro-spinal fluid on the interaction between Rh agglutinins and agglutinogens.
M. J. Australia *2:* 740-743, Nov. 23, 1946,

(From the Red Cross Blood Transfusion Service (Victorian Division) and the Walter and Eliza Hall Institute of Research in Pathology and Medicine, Melbourne).

In view of the pronounced effect of human serum, when used instead of saline solution as a diluent, on the interaction between anti-Rh serum and appropriate red cells (Wiener's "Conglutination" test), an experiment was carried out to determine what would be the effect of using human cerebro-spinal fluid as the diluent in such tests.

Summarizing: 1. Three specimens of human serum containing strong anti-Rh agglutinins did not agglutinate group O Rh cells when chemically normal cerebro-spinal fluid was used (instead of saline solution) as the diluent for the serum dilutions and the red cell suspensions. Similar results were obtained (and in some cases repeatedly confirmed) with fifteen different samples of cerebro-spinal fluid. A fourth specimen of anti-Rh serum was inhibited by six of the fifteen cerebro-spinal fluid samples and almost completely by two. There was insufficient cerebro-spinal fluid from the remaining seven samples to carry out tests with this serum. 2. Two anti-Rh sera were partially inhibited by the use of cerebro-spinal fluid as a diluent, but gave some agglutinations with each of the fifteen samples of cerebro-spinal fluid tested. 3. The inhibition occurred irrespective of whether the subjects from whom the samples of cerebro-spinal fluid were obtained were Rh-positive or Rh-negative. 4. Exposure to cerebro-spinal fluid does not destroy the agglutinability by anti-Rh serum of Rh-positive red cells, as they can subsequently be agglutinated when removed from contact with cerebro-spinal fluid. 5. The inhibition of Rh-agglutination by cerebro-spinal fluid can be overcome by the addition of human serum or human albumin. 6. Artificially prepared fluids containing the main known chemical components of cerebro-spinal fluid do not mask Rh-agglutination, nor does the chemically similar allantoic fluid of the chick embryo. 7. Cerebro-spinal fluid from one Rhesus monkey and one rabbit had a similar effect on human Rh-agglutination, as did fifteen samples of human cerebro-spinal fluid which were chemically normal or had a protein content ranging from 35 to 120 milligrammes per 100 millilitres. 8. The factor in cerebro-spinal fluid causing inhibition of Rh-agglutinins was not destroyed by heating to 56° C. or 62° C. for thirty minutes, or by boiling for five minutes. 9. Some experiments suggest a relationship between the action of cerebro-spinal fluid and the blocking phenomenon. Five tables. Three references.

9. **Riley,** Kathleen A., M.D.: Use of pressure bandages in the treatment of pemphigus. Report of a case. Arch. Dermat. & Syph. *54:* 711-712, Dec. 1946.

(From the Division of Dermatology and Syphilology of the Department of Medicine, Duke University School of Medicine, Durham, N. C.)

Pressure bandages, in a case of pemphigus foliaceus, proved valuable in stimulating growth of epithelium and simplifying the nursing problem. It is suggested that this procedure may be found useful in other similar dermatologic problems.

10. **Powell,** Elizabeth B., M.D.: Granular cell myoblastoma.
Arch. Path. *42:* 517-524, Nov. 1946.

(From the Department of Pathology, Baylor University College of Medicine).

Four cases, typical histologically of so-called granular cell myoblastoma, are reported. In the first three cases the tumor was nonencapsulated and locally invasive. In case 3 there was actual destruction of the neighboring tissue by the lingual neoplasm. In none of these cases were longitudinal or cross striations present, nor was there any definite pattern to the arrangement of the cytoplasmic granules. Sections of the myoblastoma of the tongue failed to show any forms transitional from myoblastoma cells to striated muscle. However, there was a remarkable organoid or pseudoalveolar pattern to the arrangement of the myoblastoma cells which gave this tumor a strong resemblance to neoplasms arising from endocrine glands. Metastatic nodules were present in the fourth case but not in the others. The third case is unusual because the tumor caused the death of the patient through local invasion and erosion of a large vessel. The fourth case is unusual because of widespread subcutaneous tumors and the involvement of both ovaries. It is believed to be the first case of granular cell myoblastoma reported in which the ovaries were involved. (Eight histological pictures of tumor cells).

11. **Bridge, E. M., M.D.; Clarke, G. H., M.D. and Abbe, Doris:** Clinical immunity in poliomyelitis.
Am. J. Dis. Child. *72:* 501-509, Nov. 1946.

(From the Department of Pediatrics of the University of Buffalo School of Medicine and the Statler Research Laboratories of the Children's Hospital).

Four cases are reported of persons having second attacks of poliomyelitis and 2 cases of persons probably having second attacks. The proportion of these cases to the total epidemic of 1944 in the area around Buffalo is such as to cast doubt on the existence of significant acquired immunity When re-exposed to the disease some persons who have had poliomyelitis previously may have minor illnesses consistent with a diagnosis of abortive poliomyelitis.

From the literature it is also evident that one attack of poliomyelitis in experimental animals does not confer immunity against subsequent infection.

In the management of cases of the disease as well as of epidemics, it appear inadvisable to rely on acquired immunity to protect persons who may be in close contact with patients. References.

12. **Constant, Elizabeth R., M.D.:** The treatment of Tinea capitis with gliotoxin in a special plastic base.
J. Invest. Dermat. *7:* 337-339, Dec. 1946.

(From the Department of Dermatology and Syphilology, School of Medicine, University of Pennsylvania, and the Dermatology Clinic of the Children's Hospital of Philadelphia).

Gliotoxin in a plastic base has been employed in the treatment of 18 cases of tinea capitis due to Microsporon audouini. The results do not indicate that is is an effective remedy for this disease. Two tables; 6 references.

13. **Fromm-Reichman, Frieda, M.D.:** Remarks on the philosophy of mental disorder.
Psychiatry *9:* 293-308, Nov. 1946.

(Presented before the Society on the Study of Personality at the Academy of Medicine, New York, May 1, 1946.)

Author develops this topic around four points: 1. Serious mental disturbance—psychosis—can potentially be treated successfully by a collaborative effort between the mentally disturbed person and the psychiatrist as participant observer, with modified psychoanalysis—dynamically oriented intensive psychotherapy—even after many years duration. 2. A person can emerge from a severe mental disorder as an artist of rank. His previous liabilities in terms of his pathogenic history, the expression of his subsequent mental disorder, that is, symptomatology, or his inner responses to either of them can be converted into assets. 3. The emotionally and mentally disturbed reactions are different in degree only, and not in kind, from the emotional and mental experiences and modes of expression of so-called healthy people. 4. Special sensitiveness, alertness, and consideration for the past and present suffering of the mentally disturbed is required from the psychiatrist who wants to understand what these people have to convey. How does this special sensitiveness, alertness, and considerateness, which the psychiatrist has to develop in his dealings with the mentally hurt and disturbed, influence interpersonal contacts with the emotionally healthy? Author illustrates these points with case experiences, and by citing cases from the world of literature and art. References.

14. **Fleming, Joan, M.D.:** Observations on the defenses against a transference neurosis.
Psychiatry *9:* 365-374, Nov. 1946.

(Read at the November 1945 meeting of the Chicago Psychoanalytic Society).

This paper presents the analysis of a woman with a severe character disorder whose childhood experiences with a psychotic mother resulted in the development of an intense need to feel omnipotent so as to provide a sense of security in the face of an extremely unpredictable, hostile environment. References.

15. **Murray, Margaret M., D.Sc., and Wilson, Dagmar C., D.P.H.:** Fluorine hazards with some special reference to some social consequences of industrial processes.
Lancet *251:* 821-824, Dec. 7, 1943.

(Dr. Murray is a lecturer in biological chemistry at Bedford College for Women, in the University of London).

Fluorine hazards, actual or potential, in England are described. A study has been made of some important consequences for dwellers in the neighborhood of certain industries. The practice of some firms of extracting fluorine from the fumes before allowing these to pass into the atmosphere is practical. In the case studied the substitution of closed kilns in the burning of ironstone would make the amount of fluorine present in the ore and coal immaterial from the public health point of view. Methods for such fluorine control are at present too rarely applied in England because flourine hazards are not sufficiently appreciated. An investigation should be made of industries creating possible flourine hazards. There should be more cooperation between government, industry and research. (Article includes one table showing effect on a family and one graph). References.

16. **Dodd, Katharine, M.D. and Rapoport, S., M.D.:** Intravenous alimentation of infants.
J. Pediat. *29:* 758-769, Dec. 1946.

(From the Children's Hospital Research Foundation and the Department of Pediatrics, University of Cincinnati College of Medicine).

This report deals with experience acquired during the last year and a half with the administration to infants by venoclysis of all, or the majority of, the needed elements of nutrition for periods up to fifteen days. Most of the children suffered from chronic or recurrent diarrhea and vomiting (9 cases). Two of the children suffered from inability to digest food. The aim was to supply adequate fluid and salts, and at least maintenance amounts of calories and protein.

It has been shown that maintenance of fluid and electrolyte equilibrium by parenteral fluid administration is possible even in small infants during periods of partial or total withdrawal of oral feeding. With the use of glucose, whole blood, plasma, and casein hydrolysate, a gain in weight may be achieved. A daily record of total intake of fluid, saline, calories, and nitrogen as part of a careful plan is an essential prerequisite of such a program. Frequent observa-

tion of the clinical appearance of the infant and of his electrolyte and osmotic equilibrium is necessary. Wide variation may be permitted in total fluid intake, provided salt intake is carefully regulated and is not excessive. Premature and very young infants require less saline in proportion to their body weight than do older infants. Contamination of the casein hydrolysate given, infection at the site of needle punctures, and thrombosis of the veins present a considerable problem. By the use of a closed system of administration, the more serious difficulties have been almost completely overcome. Thrombophlebitis and wound infection continue to be troublesome. Twelve charts; 7 references.

17. **Felton,** Harriet M., M.D. and Flosdorf, E. W., PhD.: The detection of susceptibility to whooping cough. I. Institutional experiences with the pertussis agglutinogen as skin test reagent.
J. Pediat. *29:* 677-686, Dec. 1946.
Felton, Harriet, M.D.; Smolens, J., and Mudd, S., M.D.: The detection of susceptibility to whooping cough. II. Clinical standardization of the diagnostic skin test reagent and its use in institutional and in private practice.
J. Pediat. *29:* 687-695, Dec. 1946.

(From the Department of Bacteriology, School of Medicine, University of Pennsylvania, and the Children's Hospital of Philadelphia).

In the first part of this study certain clinical investigations with respect to the use of a purified agglutinogen of phase I H. pertussis as a skin test reagent in institutional epidemics of pertussis are reported. The first epidemic occurred in February 1942 at the New England Peabody Home for Crippled Children.

The results of agglutination tests one month after the first skin test showed such an increase in titer that the question arose as to whether this was caused by the skin test antigen, the presence of whooping cough in the institution or by both facts. Therefore parallel studies were done in an institution (Children's Heart Hospital of Philadelphia), in which there was no whooping cough. The effectiveness of the skin test reagent as an antigen was well established by the results obtained in this control institution.

A second institution in which one case of whooping cough appeared (Alfred I. du Pont Institute of Nemours Foundation, Spring 1943) all secondary cases occurred in individuals who had had negative skin tests.

In part II. of this study of agglutinogen of phase I H. pertussis prepared by a method of chemical extraction was compared with the sonic-extracted material which was shown to be a satisfactory skin test agent for susceptibility to pertussis. The acid-extracted agglutinogen was standardized against the sonic product and found to be more potent and to give more clear-cut reactions. Review of these data showed that a twenty-four-hour reading time could be recommended. At present the skin test dose is estimated in units by laboratory methods and assayed finally by human intradermal inoculation. This agglutinogen gives identical results to those obtained with the sonic-extracted material; there is no reaction even in large doses in normal (susceptible) individuals, and an allergic reaction at the site of injection in any individual with solid immunity to whooping cough from either immunization or previous attack of the disease.

In an institution with annual outbreaks of whooping cough (Pennsylvania School for the Deaf), the use of agglutinogen before the anticipated epidemic was followed by a significant decrease in the number of cases, all of which occurred in the group predicted by the skin test to be susceptible. Yearly skin testing of new students followed by immunization of all susceptible children has resulted thus far in the absence of whooping cough from this school.

Comparision of the agglutinogen skin test with the Strean toxin test in children from the City of Philadelphia Health Centers has been made. The results clearly indicated a close correlation between the history and the agglutinogen skin tests results. On the other hand, results from the use of the Strean test revealed that satisfactory correlation between history and toxin test only existed in the group of known susceptible children.

The use of agglutinogen, the authors conclude, has a definite place as a public health measure in periodic examinations of young children. The duration of primary immunization may be determined while the antigenicity of agglutinogen produces a prompt recall of any exisiting antibacterial immunity. Ten tables; 19 references.

18. **Knop,** Catharine, M.D.: The dynamics of newly born babies.
J. Pediat. *29:* 721-728, Dec. 1946.

(Abridgment of thesis submitted by Dr. Knop, Fellow in Pediatrics, Mayo Foundation to the faculty of the Graduate School of the University of Minnesota, in partial fulfillment of the requirements for the degree of M.S. in Pediatrics. From the Rochester Child Health Project.)

This is a study of the dynamics of newly born infants who were examined twice during their eight-day stay in the hospital. Factors which might have influenced their dynamics were evaluated.

Of 689 infants examined, twenty-six were classified as grade 1 (least active), 465 as grade 2, 192 as grade 3, and six as grade 4 (most active. The sex distribution showed a prevalence of boys in the higher grades. No definite correlation could be established between the babies' weights and their dynamics. A distinctive influence of pathologic findings in mother and child on the infants' dynamics was observed. The accumulation of serious defects in grade 1 and the absence of serious illnesses in grade 4 are noteworthy. The relation of the mothers' labor and method of delivery to the grading of dynamics was inconclusive. The investigations on the decrease and increase of dynamics from the first to the second examination showed a 13 per cent change from one grade to the next one. Two babies made a change of two grades. The evaluation of the data obtained encourages the hope that dynamics as defined here is an inherent quality and is not decisively altered by outside factors. Five tables: 2 figures.

19. Kaplan, I. I., M.D. and **Rosh,** Rieva, M.D. A study of patients treated over a period of twenty years in the Radiation Therapy Department of Bellevue Hospital, New York City.
Radiology *47:* 583-592, Dec. 1946.

(From the Radiation Therapy Service, Bellevue Hospital, New York, N. Y. Read by title

at the Twenty-first Annual Meeting of the Radiological Society of North America, Chicago, Ill., Nov. 9-10, 1945.)

(Dr. Rosh is visiting Radiation Therapist, Bellevue Hospital; Instructor in Surgery, New York University College of Medicine.)

Of the 81 patients treated by preoperative irradiation surgery, and postoperative irradiation, followed for a period of five years, 31 are known to be alive and 19 are known to be dead. Longevity records for the entire group of 833 cases are appended; 749 cases were followed up to 5 years, 84 patients lived beyond the 5-year period. Authors conclude:

Irradiation is a valuable adjunct to surgery in the treatment of breast cancer. The best results are achieved following early diagnosis, with preoperative irradiation, surgery, and postoperative irradiation. For favorable results surgery should follow within three weeks after preoperative irradiation has been administered. X-ray therapy administered at any period after surgery is of definite value in alleviating distress and in prolonging life. Hormone therapy has proved of little value in the control of breast cancer or its metastases. Breast cancer associated with pregnancy offers a poor prognosis. Sterilization in young women with breast cancer is definitely advocated. Six figures; statistical records; 15 references.

20. **Crosse,** V. Mary, M.D., D.P.H., M.M., S.A., D. Obstet, R.C. O.G.
The General Practitioner and the Premature Baby.
Birmingham M. Rec. *15:* 79-90, Dec. 1946.

(Dr. Cross is Deputy Senior Assistant Medical Officer of Health (for Maternity and Child Welfare), and Senior Medical Officer-in-charge of Infants in City Maternity Homes and Premature Baby Unit. She is also Lecturer in Child Welfare, Birmingham University.)

In this paper, the possible methods of reducing mortality due to prematurity are considered. Two lines of approach are considered: 1. Reduction of the incidence (consideration of causes and treatment), and 2. Special care of the baby when premature labor occurs. With regard to the second point, the care of the premature baby during delivery, the chief dangers are discussed and means for avoiding these (intracranial birth injury and asphyxia). The care immediately after birth, the home or hospital care, the question of transportation, and the subsequent care of the premature infant in its own home are discussed in some detail. The chief dangers in the subsequent care of the premature baby in its own home are chilling, cyanotic attacks, infection and feeding difficulties which the author takes up in great detail, as well as other complications which may occur.

Author concludes that reduction of fetal and neo-natal deaths from prematurity can only be achieved by full cooperation between all the various administrative officials, t he general practitioner, the obstetrician, the midwife, the health visitor, and so forth.

Sixteen references.

21. Brewer, Wilma, Porter, Thelma, Ingalls, Ruth and **Ohlson,** Margaret, A., Ph.D.
The urinary excretion of riboflavin by college women.
J. Nutrition *32:* 583-596, Dec. 10, 1946.

(From the Department of Foods and Nutrition, School of Home Economics, Michigan State College, East Lansing.)

The urinary excretion of riboflavin by college women was studied on non-restricted diets, after an oral test dose, and on controlled riboflavin intakes. The urinary excretion for twenty women on self-selected diets ranged from 0.06 to 0.92 mg. in 24 hours. The 1-hour fasting excretion, the 4-hour and the 24-hour excretions after an oral test dose of 3 mg. were significantly related with the average daily urinary riboflavin excretion for 3 days preceding the test dose administration. From three to nine subjects were studied at each of the following riboflavin intakes: 0.79, 1.04, 1.26, 1.62, 2.23 and 2.72 mg. daily. The average urinary riboflavin for the last 3 days of each period of controlled diet were as follows: 0.07, 0.16, 0.13, 0.32, 1.18 and 1.31 mg. per 24 hours. The percentage of a 3-mg. test dose excreted in 24 hours following the period of controlled intake was, respectively, 22, 30, 27, 31, 55 and 56. A comparison of the data from this study and the data reported in the literature indicated that 1.3 to 1.5 mg. riboflavin per day were adequate for women with a requirement of 2100 to 2300 calories. Five tables; 2 figures (graphs); 16 references.

22. Edwards, L. E.; Sealock, R. R.; O'Donnell, W. W.; Bartlett, G. R.; Barclay, M. B.; Tully, R.; **Tybout,** Rita H.; **Box,** Jean, and Murlin, J. R.
Biological value of proteins in relation to the Essential Amino Acids which they contain. IV: The analysis of fifteen protein foods for the ten essentials.
J. Nutrition *32:* 597-612, Dec. 10, 1946.

(Department of Physiology and Vital Economics, University of Rochester, Rochester, New York. Supported by grants from the Nutrition Foundation.)

Whole egg, beef, horsemeat, halibut, haddock, soybean flour (fat extracted), navy beans, dry, three blends of Brewer's yeast; torula yeast, corn germ (defatted), wheat germ (defatted), cotton seed meal (defatted), peanut flour (defatted), sun flour seed meal (defatted) were tested for arginine, histidine, isoleucine, leucine, lysine, methionine, phenylalanine, threonine, tryptophane, valine. Four tables; 20 references.

Hawley, Estelle E., Ph.D.; Edwards, L. E.; Clark, L. C., and Murlin, J. R.
Biological value of proteins in relation to the essential amino acids which they contain. V. Comparison of the average effect of ten single amino acids with extra egg protein as supplements to an egg diet.
J. Nutrition *32:* 613-630, Dec. 1946.

(Department of Vital Economics, University of Rochester, Rochester, N. Y.)

(The work described in this paper was done under a contract, recommended by the Committee on Medical Research, between the Office of Scientific Research and Development and the University of Rochester.)

A comparison was made of the average effect on nitrogen balance of feeding to each of ten members of a diet squad a single but different one of the ten essential amino acids, with the effect of a small amount of whole egg protein added as a supplement to the same diet containing already an inadequate amount of this protein. The results were: That the supplement of egg supplied 0.7 gm. essential amino acid

nitrogen of natural form, while the ten synthetic essentials supplied on the average only 0.46 gm. from natural isomers. That the average retention of the egg nitrogen was 0.819 gm. or 71% of the total nitrogen fed, indicating that some non essential nitrogen must have been retained; while the average retention from the ten essentials was, in two experiments, 0.419 and 0.426 gm. or 54.5 and 55.4% respectively, of the average total nitrogen fed in the essentials, indicating a large wastage of nitrogen from the amino acids. Calculated on the basis of the nitrogen from the natural isomers only, the retentions in the two experiments were 91 and 93%, respectively. The effects on biological value relative to the egg basal diet were about the same from the two types of supplement; namely, a reduction of seven points in the percentage scale.

Other observations were that women appear to be better conservators of nitrogen than men, and that in fifteen of twenty tests the presence of amino acids in the diet reduced the fecal nitrogen, notwithstanding that each subject ingested from 0.43 to 1.0 gm. more nitrogen than from the basal egg diet alone. Four detailed tables; 8 references.

23. **Pye,** Orrea Florence, M.D. and **Mac Leod,** Grace, Ph.D.
The utilization of iron from different foods by normal young rats.
J. Nutrition *32:* 677-687, Dec. 1946.

(Nutrition Laboratory, Teachers College, Columbia University, New York.)

(Data in this paper were taken from a dissertation submitted by Orrea Florence Pye in partial fulfillment of the requirements for degree of doctor of philosophy under the Joint Committee on Graduate Instruction, Columbia University.)

It was found that: 1. The iron of whole wheat flour was about equal in availability to that of ferric chloride; 2. The iron of beef liver was almost but not quite as available as that of ferric chloride; 3. The iron of other food materials tested (beef muscle, egg yolk, uncooked and cooked kale, and uncooked and cooked spinach) was less available than that of beef liver, the differences among these supplements was small; 4. In general the order of "iron availability" of these different foods was the same as that observed in studies of hemoglobin regeneration in anemic rats, but the differences were smaller.

When normal young rats were given diets containing readily available sources of iron (whole wheat flour, half whole wheat, half unenriched patent flour, unenriched patent flour, unenriched patent flour plus ferric chloride) for a six-week period, it was found that: 1. Hemoglobin production and iron storage were improved when the level of intake of iron averaged slightly more than 0.002 mg. per gm. of body weight daily (Diet I); 2. Levels of iron averaging lower than 0.002 mg. iron per gm. of body weight daily were insufficient to bring about good hemoglobin production; a level slightly lower resulted in a small hemoglobin gain (Diet II) but when the level of iron averaged below 0.001 mg. (Diet II) no gain was observed in 6 weeks; 3. Levels of iron averaging lower than 0.002 mg. iron per gm. of body weight were insufficient to bring about much increase in the iron content per gm. of rat in 6 weeks. Three figs. (graphs); 1 table; 13 references.

24. Watt, J. and **Gutelius, Margaret F., M.D.**
Acute diarrhea in children.
New Orleans M. & S. J. *99:* 266-270, Dec. 1946.

(From the Division of Infectious Diseases, National Institute of Health, Bethesda, Maryland, the Department of Pediatrics, Tulane University, School of Medicine, and the Charity Hospital in New Orleans, Louisiana.)

This is a general discussion of the subject from the standpoint of diagnosis and treatment. Authors summarize as follows:

The management of the severe case of diarrhea requires a good laboratory for best results. The laboratory provides the means of intelligently combatting acidosis in dehydration, the usual cause of death when it occurs. Second, it provides a basis for intelligent use of specific therapeutic agents now available. With or without such facilities, however, the important thing to remember is that energetic treatment of the dehydration and acidosis does more to save life and shorten illness in young children than any other single measure. This combined with specific sulfonamide therapy will effectively bring about recovery of all but the most severe cases. Six references.

25. **Taussig,** Helen B., M.D.
Clinical and pathological findings in cases of Truncus arteriosus in infancy.
Am. J. Med. *2:* 26-34, Jan. 1947.

(From the Harriet Lane Home of the John Hopkins Hospital and the Department of Pediatrics, John Hopkins University School of Medicine, Baltimore, Maryland.)

A truncus arteriosus may be defined as a single great vessel of abnormally large caliber, from the base of which the coronary arteries arise, and which receives the blood from both ventricles and pumps the blood to the body and to the lungs by way of arterial pathways, i.e. either the pulmonary artery arises directly from the aorta or the circulation to the lungs is by way of the bronchial arteries. In most instances the ductus arteriosus fails to develop; it is never of functional importance.

Two cases of truncus arteriosus in infants are reported. In the first case the circulation to the lungs was by way of the bronchial arteries and cyanosis was intense. In the second case the pulmonary arteries arose directly from the aorta; consequently, there was adequate circulation to the lungs and cyanosis was absent.

In both cases the contour of the heart in the left anterior oblique position was identical. In each instance the right ventricle extended out abruptly from the aorta to the anterior chest wall as a shelf. At autopsy the structures of the ventricles and their relation to the truncus arteriosus were found to be identical. Therefore, the author believes that this contour is characteristic of a truncus arteriosus in infancy in which the ventricles are normally formed and in which the aorta over-rides the ventricular septum and receives blood from both ventricles. Five figures; 23 references.

26. Kemmerer, A. R.; Fraps, G. S. and **De Mottier,** Jeanne.
Effect of xanthophylls, chlorophylls, sulfasuxidine and alpha-tocopherol on the utilization of carotene by rats.
Arch. Biochem. *12:* 135-138, Jan. 1947.

(From the Division of Chemistry, Texas Agricultural Experiment Station, A. & M. College of Texas, College Station, Texas.)

Rats approximately 28 days old, reared by females on a diet low in vitamin A were used. It was found that xanthophylls and chlorophylls when fed with carotene dissolved in cottonseed oil decreased the utilization of carotene for liver storage of vitamin A about 20%. Alpha-tocopherol or sulfasuxidine did not affect the utilization of carotene in spinach for liver storage of vitamin A. One table; 8 references.

27. **Morgan**, Isabel M., Ph.D.
Allergic encephalomyelitis in monkeys in response to injection of normal monkey nervous tissue.
J. Exper. Med. *85:* 131-140, Jan. 1947.

(From the Poliomyelitis Research Center, Department of Epidemiology, Johns Hopkins University, Baltimore.) Aided by a grant from the National Foundation for Infantile Paralysis.

By subcutaneous injection of central nervous tissue emulsified with adjuvants according to Freund's technique it has been possible to induce in the majority of monkeys an acute disseminated encephalomyelitis which is interpreted as an isoimmunization to CNS tissue. Positive reaction occurred only in response to CNS tissue containing white matter; i.e. cerebral white matter, spinal cord(whether normal or poliomyelitis-infected), and cortical "gray" matter (with an estimated 10 per cent contamination with white matter). No reaction occurred when peripheral nerve or kidney suspension or saline alone was injected with adjuvants. The perivascular and extravascular infiltration induced was confined to the CNS.

Description of pathological lesions of the brain and spinal cord. Two plates with six figures showing sections through brain and spinal cord. One detailed table of results; 21 references.

28. **Anderson**, E. E., M.D. and **Boog**, Janet M., M.D.
Early ambulation in gynecological surgery and in obstetrics.
Nebraska State M. J. *32:* 26-29, Jan. 1947.

(From the Department of Obstetrics and Gynecology, University of Nebraska College of Medicine and University Hospital.)

After a brief discussion of the physiology and history of early ambulation, authors discuss their clinical material consisting of 182 major gynecological operations and 482 obstetrical patients. They discuss contraindications emphasizing that this type of management is not a "cure all" for operative sequelae. Contraindications in gynecological surgery are extreme debilitation, anemia (acute or chronic), peritonitis and large intraperitoneal abscess cavities. Contraindications in obstetrics are severe postpartum hemorrhage, extreme debilitation, pyelonephritis and peritonitis, chiefly.

From this small series of major gynecological operations done under spinal anesthesia, authors conclude that a therapeutic system of early postoperative rising is successful in reducing pulmonary complications and vascular accidents. The eviscerations and hematomas reported are no more than usual in any such group, and they could have been almost wholly avoided by better management of coaptation of tissue layers and careful hemostasis. There appear to be far fewer late post operative sequelae such as ventral hernia or recurrent cystocoele or rectocoele. With respect to obstetrical cases, authors conclude that proof cannot be given that early postpartum ambulation will not predispose to relaxations and procidentias. No immediate effects have been noted during a year's time. Pulmonary accidents and complications due to venous stasis, phlebothrombosis and thrombophlebitis have not been reported. Retained secundines and subinvolution were no higher in this group than in late ambulatory groups. Sixteen references.

29. **Abbott**, W. E. and **Meyer**, Frieda L.
Chemical alterations occurring in the surgical patient and their interpretations.
Tr. West. S.A. (1945) *53:* 322-352, 1946.

(From the Department of Surgery, Wayne University College of Medicine, Detroit, Michigan.)

This is a review of studies from the literature and of the authors' own experiences with respect to chemical alterations occurring in the surgical patient. There are nine tables and two graphs. Six of the tables illustrate experiences of the authors in 11 cases. Authors summarize as follows:

The point that is so frequently lost sight of in interpreting chemical data is that the size of the blood volume and the extracellular and intracellular fluid compartments are often markedly altered in disease states, as well as the solute concentrations. Thus when only the latter is known it offers little assistance in prescribing treatment unless one has a thorough understanding of the volume changes which might be present.

The handling of the seriously ill patient from a metabolic standpoint therefore can be efficiently done only if a thorough knowledge of the chemical and physiologic alterations which may occur are available.

It should not be necessary to do complete nitrogen balance studies, plasma volumes, et cetera, on each patient but rather it is important that the changes which do occur are recognized clinically and thus a logical therapy prescribed. Much can be derived from a careful history, physical examination, and by close observations of the patient and his response to therapy. Fortunately most cases present very few problems, and it is primarily the individual who is seriously ill that needs such special care. In patients who have been sick for more than several days there are often significant changes in the metabolic state due to a deficient caloric and fluid intake. The use of parenteral therapy (amino acids, glucose, vitamins, water and salts) has recently been well discussed by Butler and Talbot and should be used if adequate diets cannot be taken orally. Along with the blood chemistry an accurate intake and output record is extremely valuable (type and amount of fluid should be recorded).

Determination of the specific gravity and the amount of chloride and nitrogen in the 24-hour urine sample may be of value in many of the more seriously ill patients, but again should never be relied on entirely to interpret the patient's state and his needs. Discussion; 68 references.

BOOK REVIEWS

PREPARED BY THE STAFF OF THE NEW YORK INFIRMARY

PREVENTIVE MEDICINE AND PUBLIC HEALTH. By Wilson G. Smillie, A.B., M.D., D.P.H., Professor of Public Health and Preventive Medicine, Cornell University Medical College, New York. Cloth. Price $6.00. Pp. 607, with 42 illustrations. New York: Macmillan Company, 1946.

The title of this book does not indicate its true character; it is not a text-book on sanitary engineering but rather, a presentation of the importance of the "family physician" in the promotion of individual, family, and community health. Although designed particularly for medical students, it can be read with profit by all physicians of any age. The introduction contains a discussion of the voluntary health agencies, their importance as well as their disadvantages; a discussion of population trends which includes the subjects of birth rate, birth control, sterilization of the unfit, and related subjects. A very valuable chapter (III) deals with the importance of Vital Statistics in the application of research to the control of disease; this chapter advises as to the proper methods of compiling statistics and of analyzing conclusions drawn from statistical data; it also points out errors which arise in statistical interpretation of medical records. Section II describes the broad principles of the sanitary control of the environment. Section III deals with the control of specific communicable diseases, the subject of epidemiology and the importance of the records which the individual physician supplies to the epidemiologist. In the section on Child Hygiene, there is a discussion of the community point of view in relation to child health protection, again stressing the role of the practitioner of medicine in a coordinated plan of community-wide protection and promotion of child health. Adult Health Protection is next discussed; here the author points out that the Health Department does not have the same specific contribution to make in Adult Health evaluation which has been developed in Child Hygiene; however, education remains the keystone of the protection of adult health. Mental hygiene and the epidemiology of mental disease are considered, with a discussion of the preventive aspects from infancy through adult life. The degenerative diseases, nutritive and deficiency diseases, cancer, syphilis, cardio-vascular disease, diabetes, hypertension, obesity, and alcoholism are reviewed from the preventive standpoint. There is also a chapter on Industrial Hygiene, in which are considered accident protection, occupational disease, and the organization of Industrial Health Services. A section is devoted to Public Health Administration and a consideration of the methods by which the various community health activities are administered. The chapter on National Health Services contains an interesting account of the origin of the U. S. Public Health Service; founded in 1902, it has more than kept pace with developments in medical science. Final chapters discuss health education, nursing services, medical social work, the adequacy of medical care, and the pros and cons of a national health program. The author recognizes that many of the subjects discussed are debatable but succeeds in presenting these subjects impartially. This book is written in a very interesting manner, illustrated by case reports which emphasize the point of view this text was intended to introduce:—the importance of the private practitioner in the protection of community health.

—Ada Chree Reid, M.D.

(EDITOR'S NOTE:—*These reviews represent the individual opinions of the reviewers and not necessarily those of the members of the Editorial Board of this* JOURNAL.)

NURSING CARE IN CHRONIC DISEASES. By Edith L. Marsh, R.N., S.C.M. $3.00. 237 pp. Illustrated. J. B. Lippincott Company, Philadelphia, 1946.

This volume on nursing care in chronic diseases is timely. The author set out with a definite aim which she seems to have carried to a conclusion. She was eminently fitted to write such a book and she has done so with the most humane touch. The book is clear and concise: it has sequence and a logical presentation. It covers a large field simply yet adequately.

It is pleasing to find that the author reaches

beyond the commonplace to include in this volume such chapters as those on psychiatric knowledge in the care of mentally disturbed patients; the importance of diet and nutrition; physical and occupational therapy and rehabilitation; and the chronically ill ex-serviceman.

The author concludes with some helpful recommendations on the construction of large hospitals for chronic cases, on housing facilities for the elderly, and on the preparation of doctors and nurses.

The author has a wide range of knowledge and a deep understanding of the chronically ill; the book should be an excellent source of ready information.

—Evelyn Gorham Downing, R.N., B.S.

SURGICAL TREATMENT OF THE SOFT TISSUES. Frederic W. Bancroft, A. B., M. D., F.A.C.S., Assoc. Clinical Professor, Columbia University: Associate Editor, George H. Humphreys, II, A.B., M.D., Sc.D., F.A.C.S., Valentine Mott, Professor of Surgery, Columbia University. 244 illustrations and numerous bibliographies. $15.00. 520 pp. J. B. Lippincott Company, 1946.

This is the first edition of this work, which comprises articles on the surgery of hernia, skin, hand and face, superficial injuries, plastic surgery, burns, freezing, infections, and neoplasms, including those of the breast. The articles are written by well known men who are leaders in their specialties. Such subjects as operation for cryptorchidism, suture of tendons, compound facial injuries, skin grafting, contractures, and harelip and other congenital anomalies show the diversity of problems which are brought up to date.

In the chapter on burns and freezing the treatment of shock is given, and also methods for the prevention of shock. This chapter is complete and authoritative and should be of help to surgeons encountering such cases.

Infections of the hand, including finger end, palm, and tendon sheath, are dealt with; chemotherapy in surgery is discussed. Neoplasms, benign and malignant, and their treatment by surgery and x-ray, comprise another section. The last section is devoted to blood vessels. Thrombophlebitis, its prevention and treatment, including lumbar sympathetic block and section or ligation of the veins, are discussed.

The book, written by experts, is authoritative and stimulating and will prove helpful.

—Mary Lee Edward, M.D.

THE EYE MANIFESTATIONS OF INTERNAL DISEASES. By I. S. Tassman, M.D., Associate Professor of Ophthalmology, Graduate School of Medicine, University of Pennsylvania, Philadelphia, Pa. Second edition. $10.00. Pp. 614, with 245 illustrations, including 24 in color. St. Louis: The C. V. Mosby Co., 1946.

In a concise and comprehensive and at the same time simple manner, Tassman describes a number of eye conditions and illustrates them with colored and black and white photographs. The book is an essential contribution to the general practitioner's knowledge of eye diseases in internal medicine. As Tassman states in his preface, he has made an attempt in this book to bridge the gap between the eye manifestations and internal medicine and thereby to serve the needs of ophthalmologists as well.

The first part describes the normal structure of the eye and its adnexa, and routine tests and methods in examining the eye. It contains five chapters, two of which are devoted to structural abnormalities. The manifestations of lids, conjunctiva, cornea, iris, lens, and retina are briefly described, so that the beginner becomes acquainted with the diseases of the eye.

Chapter 6 is devoted to congenital malformations and hereditary ocular conditions. The general diseases, like Tay-Sachs', Niemann-Pick's, von Recklinghausen's, and other diseases, and the eye manifestations are described and well illustrated.

Infectious diseases, syphilis, tuberculosis, and eye symptoms and signs are the content of Chapters 7, 8, and 9. Virus and fungi infections, and ocular parasites are described in the next three chapters. One chapter is devoted to the eye manifestations of chemical and drug intoxications.

Chapters 15 and 16 describe diseases of the cardiovascular system and of the blood; the eye manifestations are beautifully illustrated with kodachrome pictures. Disorders of menstruation and pregnancy, metabolism, and endocrine glands disturbances are described in the next two chapters. Diseases of nutrition, avitaminosis, diseases of the nervous system, and intracranial tumors and the accompanying eye signs and symptoms with visual fields defects are briefly described in three chapters. The final two chapters are devoted to skin diseases and to diseases of the bones of the skull.

The material is well systematized, the print is easy on the eyes, and the book is a very desirable addition to the library of the internist as well as of the ophthalmologist.

—Olga Sitchevska, M.D.

THE CARE OF THE AGED (GERIATRICS). By Malford W. Thewlis, M.D., Attending Specialist, General Medicine, United States Public Health Hospitals, New York City; Attending Physician, South County Hospital, Wakefield, R. I.; Director, Thewlis Clinic; Special Consultant, Rhode Island Department of Public Health. Fifth Edition, thoroughly revised, with 65 illustrations. 500 pp. C. V. Mosby Company, St. Louis, 1946. Price: $8.00.

This is a new edition of a book first published in 1919, one of the first to emphasize the special medical problems encountered in the care and treatment of persons of advanced age. It represents clinical observation over a period of thirty-four years.

The book contains a careful study of the aged in health as well as in disease and of the social and physical adjustments that they have to make. There are sections devoted to Diseases of Metabolism, Infectious Diseases, and Systemic Pathologic Conditions, fully considered as to symptoms, course of the disease, and treatment. Throughout the work special emphasis is placed on the fact that diagnosis and treatment of many of the illnesses of the aged are different from those of the same illnesses in younger people.

Dr. Thewlis does not urge that geriatrics be considered a specialty, but rather suggests that physicians should devote special attention to geriatric practice.

—Marion Manter, M.D.

DISEASES OF THE NOSE, THROAT AND EAR. Edited by Chevalier Jackson, M.D., Sc.D., LL.D., F.A.C.S., Honorary Professor of Broncho-Esophagology, Temple University, Philadelphia; and Chevalier L. Jackson, M.D., M.Sc., F.A.C.S., Professor of Broncho-Esophagology, Temple University, Philadelphia. With the Collaboration of 64 Outstanding Authorities. 844 pages with 934 illustrations on 581 figures including 18 plates in color. Philadelphia and London: W. B. Saunders Company, 1945. Price: $10.00.

"Diseases of the Nose, Throat and Ear; is not only an extensive and inclusive coverage of the subject; it is a remarkably readable book. The text is concise and clear, and treatment in each instance is unusually well outlined. The illustrations are numerous and well reproduced with parts clearly labelled on the plates themselves. The latter half of the book is a careful and detailed work on bronchoscopy and esophagoscopy by the Drs. Jackson, father and son. While treating of a highly specialized subject, this section contains much which should have the attention of the general practitioner as well as of the specialist. For instance, on the subject of Bronchoscopy in Relation to Chronic Bronchitis, Dr. Jackson states, ". . . Any patient with symptoms of a chronic bronchitis cannot be considered as completely examined unless an objective examination of his tracheobronchial tree has been made with the bronchoscope." ". . . . Of 92 consecutive patients referred to the Bronchoscopic Clinic at Temple University Hospital with a working diagnosis of chronic bronchitis forty had localized bronchial stenosis, twenty-one had early bronchiectasis, four had tumors—benign, borderline, or malignant, seven were tuberculous; only twenty had nothing more than an objectively evident diffuse mucosal bronchitis." The book concludes with a group of articles of general interest, including Endoscopic Photography, Aviation Otolaryngology, Chemotherapy, and Anesthesia.

—Geraldine E. Watson, M.D.

PUBLIC HEALTH FELLOWSHIPS FOR PHYSICIANS

Announcement is made, by Surgeon General Thomas Parran of the U. S. Public Health Service, that applications for fellowships in post-graduate public health training for physicians for the school year beginning in the fall of 1947 will be received at any time prior to May 1, 1947. The fellowships provide graduate training of approximately nine months in an accredited school of public health, followed by three months of field training, and are open to men and women citizens of the United States, under forty-five years of age. Physician applicants must have completed at least one year's internship. Applicants may secure further details by writing to the Surgeon General, United States Public Health Service, 19th and Constitution Ave, N.E., Washington 25, D. C. Attention: Public Health Training.

CANCER TRAINEESHIPS

Dr. Thomas Parran, surgeon general of the United States Public Health Service, has recently announced that the National Cancer Institute, which operates as a division of the National Institute of Health, has funds to train approximately thirty physicians in the diagnosis and treatment of cancer. Under a federally financed program, doctors wishing to specialize in this field may be appointed as trainees and be assigned to authorized non-federal, non-profit institutions in various parts of the country. Applications for traineeships should be sent to the Director, National Institute of Health, Bethesda, Maryland.

Elizabeth Blackwell

The First Woman Doctor

RACHEL BAKER

Author of "The First Woman Doctor," and "Dr. Morton, Pioneer in the Use of Ether."

IT IS NATURAL to wonder what made Elizabeth Blackwell, a genteel and well-bred English girl, put up with the humiliations and trials which stood between her, and all women, and the profession of medicine. The answer lies in her childhood and in her attachment to her father, in the vision of life which she had absorbed from him.

In 1821 Elizabeth Blackwell was born in Bristol, England. She was brought up with her seven brothers and sisters in a house near her father's sugar refinery. Samuel Blackwell insisted that his girls should be taught with the same thoroughness as their brothers. They were reared in days when the word 'feminism' was still to be invented. Mr. Blackwell was a member of the stern Independent church, and believed fiercely in equality. All nationalities, races and colors, were to him, equal. He opposed the slave trade to America. He agitated for better working conditions in the sugar refineries and in the mills. He hated discrimination and violence, and when a mob tried to burn the beautiful church of St. Mary Redcliffe, they were met on the steps by Samuel Blackwell, who was willing to risk his life to protect a creed to which he did not adhere.

His daughter Elizabeth became the first woman doctor in America, and her sister one of the world's first women surgeon physicians. His two sons fought for women's rights in America, one as the husband of the first woman minister to be ordained, and the other as the husband of the famous founder of the woman's rights' movement, Lucy Stone.

Mr. Blackwell's refinery was destroyed in a fire, when Elizabeth was eleven years old, and the family emigrated to America. There Mr. Blackwell's business did not prosper, but his zeal for equality did. Her father's more than lip-service to the ideal of human equality Elizabeth observed. When the Blackwells removed to Cincinnati, where the father died, the formation of Elizabeth's character, had been completed. She helped her mother and sisters to run a school for children, and afterwards herself taught in a Mississippi town. But

Taken August, 1907, at age 86½ years.

she felt the restlessness of being fitted for a harder task.

A friend who was very ill, once said to her that it was strange that women with their great feeling, gentleness and sympathy, should never be physicians. Here was the career for the daughter of Samuel Blackwell, and frail, reserved, shy Elizabeth Blackwell, fought the battle all alone. In the evenings she studied anatomy with a physician who asked his lessons to be kept a secret. Later, throughout a hot summer in Philadelphia, in an attic dissection room she continued these studies.

Every medical school in the country refused her, until at Geneva College, near the border of

Canada, the student-body with a great guffaw at her application, voted jokingly to let her enter. She did. The professors were embarrassed, the students hostile, and the women of the town pulled away their skirts when she passed. When asked to stay away from the anatomy class, she answered, "within the sight of God, the human body is holy, and the pangs of disease are not biased."

She was graduated, *Domina* Blackwell, the first woman in history to receive a medical degree. She got her diploma in 1849. To the president of the College, Dr. Benjamin Hale, she said "Sir, I thank you. By the help of the Most High it shall be the effort of my life to shed honor upon your diploma." At the risk of her life, she did so. At pest-ridden Blockley Almshouse in Philadelphia, under terrible conditions she worked calmly through an epidemic of ship-fever, and wrote her thesis on this subject.

She went to France for graduate study, and found her diploma so much meaningless paper. French physicians thought a woman-doctor a monstrosity. And so, humbly she put on the coarse apron of the peasant girls who made beds and carried basins while serving as apprentice midwives at famous La Maternité. There she watched operations, and mumbled the A. B. C.'s of physiology in a class outside, which the ignorant farm girls attended.

Washing the eye of a baby stricken with ophthalmia, a little deadly liquid squirted into her own. It cost her the sight of one eye, and she returned to America. In New York she tried to set up her practice, but no landlady would admit her. She was not allowed to put out a sign. Finally she established a little infirmary, in a shabby room in lower New York, and the poor people came.

By charitable Quaker friends, she was aided in her lectures and bazaars, in her fund-raising efforts, and even the famous editor, Horace Greeley, gave his voice. Her ambition was to found a hospital where women physicians might practice, where women nurses would be trained, and where women would be treated by women. In 1857*, the New York Infirmary for Women and Children was opened.** Elizabeth's younger sister, Emily, had through her efforts been admitted to study medicine, and came to her as a surgeon. Marie Zakrzewska, whom she had trained, also obtained a diploma and came to help her.

The three women set up the first school to train nurses in America. They set up a medical college.

The New York Infirmary in 1857 at 64 Bleeker Street.

But at every step they were outraged and flaunted. A woman died in their hospital of the then incurable appendicitis. A mob gathered to burn the building and kill the women doctors, but the intercession of a grateful patient, whose own life had been saved by Dr. Elizabeth, saved the building and the lives of the doctors.

She fought for better housing, home hygiene, and a sounder education of the young about their own bodies. She pleaded for sunshine, good food, and proper working hours.

When her pioneer work was well-launched in America, she left her sister, Dr. Emily Blackwell, in charge of the New York Infirmary for Women and Children, and returned to England. There she practiced in London, where the women who had been trained in her school in America as physicians, asked her to help them establish a school of medicine and a hospital for women doctors in England.

Working with Dr. Elizabeth Garrett Anderson, one of her former students, and with Dr. Sophia Jex-Blake, she helped them found their first dispensary. She campaigned for a woman's medical college (The London School of Medicine for Women) and for a Women's hospital staffed by women physicians, like her own Infirmary, which to this day, and under the same principle, operates with a famous staff in New York.

She believed in prevention and hygiene at a time when these ideas were as revolutionary as Pasteur's once had been. She founded the British National Health Society with its motto, "Prevention is Better than Cure." She lectured, taught

* The New York Dispensary for Poor Women and Children was opened by Dr. Blackwell in March, 1854.—Ed.

** At 64 Bleecker St.

and wrote vigorous books, which were banned; and she fought bishops and censors to get them published. Her "Moral Education of the Young," and her "Religion in Health," are being rediscovered and read with profit today. Rightly she said, "Perhaps it's for the year 1970 that I'm writing!"

Famous people came to know and honor her: George Eliot, Lady Byron, Herbert Spencer, Dante Gabriel Rossetti, and Charles Kingsley. She was never a cold, scientific, career-woman in white. She urged the humane touch in medicine, and felt that women would therefore be better doctors. A whole generation of women physicians grew up to carry out her womanly tradition, which was deeply scientific, because it was human.

When she retired to a cottage in Hastings her elder sisters, Marion, and Anna, the retired journalist, came to live with her. They died and she was left alone with an adopted daughter, Kitty. In 1899, the fiftieth anniversary of her graduation was celebrated in America, and in the College grounds where once she had been scorned, her portrait was hung in honor, and Elizabeth Blackwell House dedicated to her memory.

When she died in 1910, at the age of almost ninety, she asked to be buried in the lovely Scottish village of Kilmun, where she had spent her summers. Her adopted daughter, Kitty Blackwell, inscribed on her stone:

> In loving memory of Elizabeth Blackwell, M.D.—born at Bristol, 3rd February, 1821; died at Hastings, 31st May, 1910. The first woman of modern times to graduate in medicine (1849) and the first to be placed on the British medical register (1859)

Underneath are a few lines from Elizabeth Blackwell's lecture on "The Religion of Health," which she gave in London in St. George's Hall, at one time, under great public protest.

"It is only when we have learned to recognize that God's law for the human body is as sacred as—nay, is one with God's law for the human soul, that we shall begin to understand the religion of the heart."

The Infirmary Tradition —PAST, PRESENT AND FUTURE

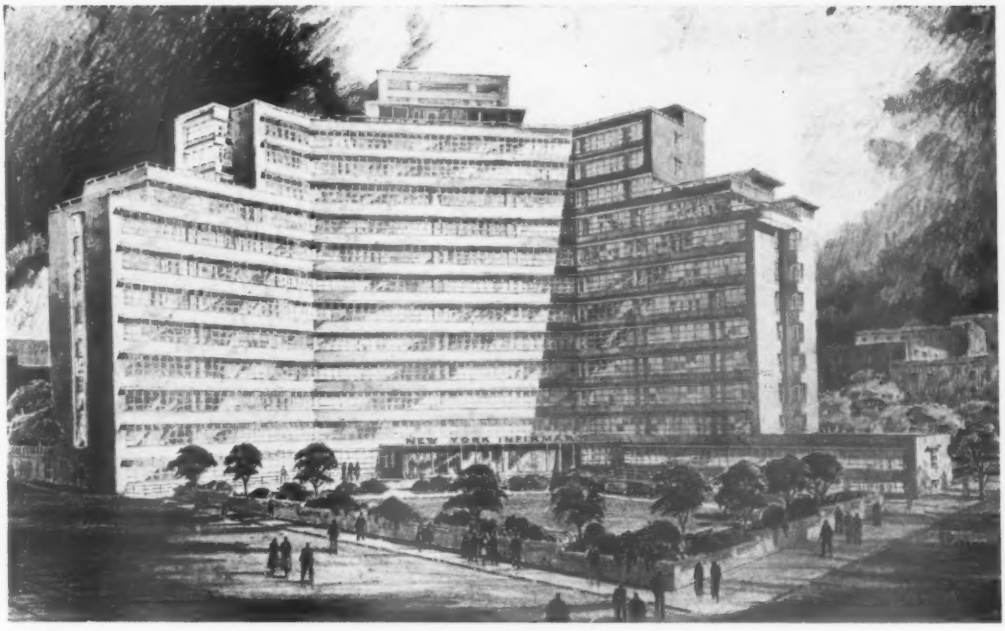
The New York Infirmary has played an important role in the careers of all medical women, for it was founded by that great leader, Elizabeth Blackwell, first woman to graduate in medicine, who opened to women the doors of medical education. This 94-year-old institution also embodies a tradition of immeasurable value to American women in all walks of life, a tradition which springs from the ability of women to pioneer in a field of public service—the practice of medicine — and to demonstrate accomplishments which exact the highest possible standards.

There are hundreds of women doctors who have never seen the Infirmary; more hundreds who have only a nodding acquaintance with its history. Irrespective, however, of direct or indirect relationship, the Infirmary's tradition, passed from one generation to another, is the reason and the beginning behind every American medical woman.

Since the middle '20's, the doctors and trustees of the New York Infirmary have known that the physical facilities of the hospital were totally inadequate to do justice to its splendid tradition or to its future plans. In 1941, therefore, they resolved to take action, only to be shocked a few days after their plans were started by the news that stunned the world—World War II. This imposed additional limitations but all thoughts of expansion were postponed until the end of the war. Finally in the summer of 1945 the trustees decided to launch the campaign for the new building and the course was set with determination.

Months of time were devoted to a study of all

The New York Infirmary Today



The *New* New York Infirmary
(Architects drawing of proposed new building.)

the ramifications of the question; what kind of a hospital would best meet the needs of medical women? Should the hospital continue its policy of limiting its staff to women physicians and surgeons? The decision to continue this policy was arrived at after months of careful study. Significant information was revealed in four surveys reported in detail in the June issue of this JOURNAL. Results supported conclusively the advisability of maintaining a modern, fully-equipped general hospital, staffed exclusively by women doctors. The question of adequate hospital staff appointments for women was explored and found to be seriously limited. These were but a few of the considerations that entered the final decision. However, present day doctors and trustees have forsaken the strongly feminist approach and have taken the practical view that the new Infirmary should provide a haven of unlimited opportunities. By the example of the accomplishments of the women physicians and surgeons whose work could be encouraged by such a congenial atmosphere, it was believed the doors of broader opportunity would be opened in other institutions for women doctors all over the world.

In the course of making its appeal to the public for $5,000,0000 with which to build a modern 350 bed hospital with every possible facility for patient care, it was proved necessary to embark upon a basic public relations program of benefit to all women in medicine, as well as the comparatively few who staff the Infirmary. The policy has been carefully defined and adhered to that women doctors, because they were women, per se, was not the issue but that the nation needed more good doctors, and women in the medical profession should be given every possible opportunity for training and experience to qualify.

It was inevitable that such things would be revealed as the fact that in the year 1947 the New York Obstetrical Society excluded women obstetricians from their membership, irrespective of their qualifications. It was also inevitable that the arbitrary policy of many hospitals regarding the acceptance of women internes and residents on a limited percentage basis would be revealed, as well as the whole subject of staff opportunities for women doctors, in general hospitals and specialty hospitals, irrespective of their qualifications. It has proved a matter of considerable public interest to learn of the accomplishments of women in medicine. Now that the public has learned some of the true facts, it is reflecting its disapproval of inequality of opportunity by tangible support of the Infirmary. A considerable number of men in the medical profession express their conviction that women deserve a chance.

All of these things have stimulated those responsible for the Infirmary Building Fund Campaign to dare to plan a new tradition for the new

THE NEW YORK INFIRMARY FOR WOMEN AND CHILDREN
126 Second Avenue, New York City
1861 - 1874

New York Infirmary which will make it an internationally important center for medical women.

Certain parts of the Infirmary's old tradition should be carried to new heights. The matter of prevention is one of them. For example: Among its pioneer accomplishments there are the first Visiting Nurse Service, and the first Medical Social Service recorded anywhere in the United States. Almost every one is familiar with the fact that the first Cancer Prevention Clinic anywhere in the world was started at the Infirmary. One of the oldest Child Guidance and Behavior Clinics, now celebrating its twentieth birthday, was established in The New York Infirmary. The question logically follows: What additional contributions can medical women make along this line, and do women have an inherent interest in the subject of prevention? What might their accomplishments be under more ideal circumstances?

The subject of race and religion enters the tradition of the Infirmary. For example, the first woman Negro doctor was trained there. An average cross-section of its patients in any one year shows 49 nationalities and 15 religious creeds. Infirmary obstetricians speak Polish, French, Italian, Spanish, German, and a smattering of Chinese. The United Nations now located in New York City could well take a chapter from the Infirmary's book of racial and religious understanding. Such experience is valuable to young women interns and residents.

Refresher and post-graduate courses, specialty training and the opportunity to prepare for specialty boards by observing and working with certain types of patients are activities which are included in the plans for the new New York Infirmary. Lecture symposiums participated in by the outstanding leaders of medical specialties are to be provided to help practicing physicians keep abreast of scientific developments.

The Infirmary's standards have always been the highest since the original definition of such standards by the American Medical Association, the American College of Surgeons, the State Department of Welfare, and New York City's Department of Hospitals. It has always been the object of Infirmary doctors to regard such standards as minimum, and it is logical to expect a multitude of still further refinements in the new hospital which will benefit those in The New York Infirmary training program as well as its patients. The vision of the new Infirmary is by no means the result of either one or two people or a comparatively small group. Many leaders of medical women's activities have shared in creating an ideal plan which every medical woman has dreamed of at one time or the other. It is the Infirmary's hope that previously untapped ideas and practical suggestions will be contributed by medical women from every state of the Union, as well as from foreign countries. If tradition has a value, it is worth preserving wholeheartedly. The Infirmary's tradition has more than demonstrated a variety of values and it is the hope that medical women all over the United States will want to take an active part not only in preserving it, but in enriching it.

A corner of the New York Infirmary's library preserves the memory of the Blackwell sisters.

Four Ways

YOU CAN HELP THE NEW YORK INFIRMARY

Build an Internationally Important Center for Medical Women

I. Make your personal contribution—you may spread the total amount over three Income Tax Deduction periods.

II. Organize a group of women doctors in your City or State to build a memorial unit (send for literature describing units, costs and memorial plaques.)

III. Organize an Infirmary project among the members of the clubs you belong to. (Send for the Membership Organization Plan suggesting effective ways to do this, and what other clubs are already doing.)

IV. Ask your patients and friends to support your interest in the Infirmary. (Send for Golden Key Scrolls which will record the names of contributors, large or small, and be preserved in the Infirmary Library as tribute to their cooperation.)

100 CENTS OF EVERY DOLLAR YOU GIVE TO THE INFIRMARY WILL BE DEVOTED TO THE NEW HOSPITAL.

Decide now what part you will play—and mail the coupon below today.

MEDICAL BOARD BUILDING FUND COMMITTEE
New York Infirmary
Room 206, Hotel Plaza
59th and Fifth Avenue
New York 19, N. Y.

(Please check one or all of the suggested ways of cooperating in which you are interested.)

__ Enclosed is my personal contribution of $_____. (or) I wish to pledge $_____ and would like a pledge card sent for my signature.

__ Send literature describing units, costs, and memorial plan.

__ Send the Membership Organization Plan.

__ Send Golden Key Scrolls and instructions.

Name _____

Address _____

City _____

State _____

BY ALICE BARTLETT
AND CARROLL BIRCH

A Medical C

1 1663-64. In the session of the Assembly of the Colony of Rhode Island and Providence Plantations which convened on March 1, 1663-64, and in the early days of that session, was passed the following special act: Whereas the Court hath taken notice of the great blessing of God on the good endevers of Captayne John Cranston of Newport, both in phissicke and chirurgery, to the great comfort of such as have had occasion to improve his skill and practice etc. The Court doe therefore unanimously enacte and declare that the said Captayne John Cranston is lycenced and commistioned to adminester phissicke and practice chirurgery throughout this whole Collony and is by this court styled and recorded Doctor of phissicke and chirurgery by the authority of this the Generall Assembly of this Collony.

1892. The Woman's Dental Association was organized in Philadelphia and like the many similar organizations its object is to promote the professional interests of its members through the advantages which association confers. Dr. Truman introduced the lady dentists in a valedictory delivered March 1, 1866. Part of his speech: Entertaining these views, I rejoice that dentistry, though the youngest of the professions, has welcomed women to two of our state organizations to full membership and have recognized her as a co-laborer in a field of interest, and one in my judgment to which she is well adapted.

2 1776. The most influential German character active for the advancement of medicine in the State of Maryland during the eighteenth century was Dr. C. F. Weisenthal. On March 2, 1776, he was commissioned as Surgeon-Major of the First Maryland Battalion under General Smallwood. Certain it is that he founded the first medical school in Maryland which was located on East Fayette Street, Baltimore. This school passed out of existence when the Medical Department of the University of Maryland was chartered in 1807. Dr. Weisenthal was the discoverer of the "Syngamus Trachealis," a parasitic worm giving rise to Verminous Tracheo-bronchitis in fowls and birds. This was the first discovery of the parasite of an infectious disease in America.

1788. "For sale, . . . Dr. Stephany's incomparable gold tincture, also his infallible ague pills (sold by no other person in this state)". (The *State Gazette* of North Carolina, March 2, 1788.)

1837. An act to incorporate Rush Medical College was passed by the Illinois General Assembly at Vandalia, March 2, 1837.

1874. The dental Hospital situated in Leicester Square, London, was formally opened on March 2, 1874.

3 1852. March 3, 1852, Nancy Clark received her Medical degree at Cleveland Medical College.

1871. William Maxwell Wood was the first Surgeon General of the United States Navy and the fifth chief of the Bureau of Medicine and Surgery. An act of Congress of March 3, 1871, provided that the "chiefs of the Bureaus of Medicine and Surgery . . . shall have the relative rank of commodore, while holding said position, and shall have respectively the title of surgeon general. . . ."

1905. Fritz Schaudin first demonstrated to his co-workers at the Imperial Board of Health, Berlin, on March 3, 1905, his epoch-making discovery, the causative agent of syphilis. The finding of the Treponema pallidum was due to Schaudin's skill in protozoological technique, and was soon followed by the steps of Metchnikoff and of Ehrlich in the conquest of syphilis.

4 1837. Chicago was organized as a city on March 4, 1837. Dr. Josiah Cosnore Goodhue designed the seal of the Corporation of Chicago.

1739. In 1730 small pox was epidemic in Philadelphia. The Pennsylvania Gazette of March 4, 1739, contained the following interesting item: The practice of inoculation for the small pox begins to grow among us. J. Gordon, Esq., the first patient of note, is now upon recovery, having had none but the most favorable symptoms during the whole course of the distemper, which is mentioned to show how groundless all those reports are that have been spread through the Province to the contrary.

1872. The third woman to be graduated from a dental college was Countess Helene Vongel de Swidersha of St. Petersburg, Russia, who received her diploma from the New York College of Dental Surgery on March 4, 1872.

5 1792. Dr. Richard Allison was appointed "Surgeon to the Legion" by Act of Congress.

6 1475. Michael Angelo, the most distinguished sculptor of the modern world, was born.

1521. Jacobus Berengarius is credited with the earliest use of mercury in the treatment of syphilis. But most noteworthy are his anatomic commentaries published pridie nonas martii.

1804. Georg Friedric Louis Stromeyer of Germany was born March 6, 1804. The founder of modern military surgery and modern Orthopedics, Stromeyer was particularly skillful in conservative joint surgery and in applying subcutaneous tenotomy to deformities of the limbs.

7 1776. On March 7, 1776, Howe notified Washington that he was about to evacuate Boston. Whereupon Washington issued a general order: "As the enemy has with assiduity spread the small pox throughout all parts of the Town, no officer or soldier may go into Boston when the enemy evacuates the Town."

1947. Birthday Greetings to Dr. Nelle S. Noble, 23rd President of the American Medical Women's Association (1939-1940).

1918. Base Hospital No. I Unit from Bellevue Hospital established a hospital at Vichy.

8 1829. Cyrus Nathaniel Chamberlain was born in West Barnstable, Massachusetts. During the Civil War he constructed and organized the Letterman United States Army Hospital at Gettysburg to take care of the severely wounded. He also organized the Dale General Hospital in Worcester, Massachusetts, in 1864.

1847. Eugene S. Talbot, an American dentist was born in Sharon, Massachusetts. He was graduated at Pennsylvania Dental College in 1871 and received the degree of M.D. from Rush Medical College in 1880 and became Professor of Dental Surgery at the Woman's Medical College. In 1890 he was honorary president of the Dental Section of the 10th International Medical Congress in Berlin and in 1897 honorary president of the Dental Section of the 12th International Medical Congress in Moscow.

Calendar FOR MARCH

9 1841. Robert Arthur's diploma, dated March 9, 1841, is generally considered the first dental college diploma ever issued.

10 1679. Thomas Sydenham 1642-1689 was an extensive but not an intensive bloodletter, resorting to the operation, however, in almost every disease known to him but with discretion. But before he died he began to doubt its usefulness, and had he lived longer this open minded and practical physician would have probably cast it aside completely. In a letter dated March 10 1679, in treating pleurisy he said that the cure is to be sought in blood letting, but three years later he writes: "I judge it likely that diet, simple cool and nutritious, might do the work of repeated bleedings and save th discomfort arising therefrom."

1876. The Medical Practice Act of Southern California was passed March 10.

1803. On March 10, 1803, Bonaparte, the First Consul, issued the first decree on the practice of medicine. Among other items this decree fixed the costume of the professors and the honors to be given them at their decease. It is still the custom to have 20 professor (agregus) assemble as a delegation at the obsequies of defunct professors.

11 1818. Deville Henrie Saint-Claire, a French chemist was born in St. Thomas, West Indies. It was he who first produced aluminum (1855) and platinum in commercial quantities and demonstrated the general theory of the dissociation of chemical compounds at a high temperature. He died in France July 1, 1881.

1850. The Woman's Medical College of Pennsylvania was incorporated as the Female Medical College of Pennsylvania. The name was changed in 1867 to the one it now bears.

1922. On March 11, 1922, the Annals of Clinical Medicine was established as the official organ of the American College of Physicians and its first issue appeared later in that year.

1829. Dr. Sarah Adamson Dolley was born March 11, 1829. In 1851 she graduated at the Rochester Medical College; the second woman in America to eceive a medical diploma. In 1886 she helped organize the first free dispensary in Rochester for women and children and in 1887 organized and was the first President of the Rochester Medical Society of Rochester the first incorporated society of women physicians entirely for scientific purposes.

12 1682. Chelsea Hospital, London, was founded March, 12, 1862, by Charles II.

1799. In the "Columbia Sentinel" of March 12, 1799, Benjamin Waterhouse refers to vaccination in down-East phrase as "something curious in the medical line."

13 1733. Joseph Priestley was born March 13, 1733. In 1776 he communicated to the Royal Society his observation on respiration in which he first experimentally ascertained that the air parts with its oxygen to the blood as it passes through the lung. He died February 6, 1804.

1860. March 13, 14, and 20, 1860, the first examination for the licentiateship in dental surgery was held in England and 43 men obtained the diploma.

14 1923. Dr. Arthur Dean Bevan performed the first operation in which ethylene-oxygen was used as an anesthetic.

15 1849. Dr. Thomas Addison read a paper on "The Constitutional and local effect of disease of the suprarenal capsules" before the South London Medical Society. His name is associated with two diseases, Addison's Disease and Addisonian Pernicious Anemia.

1937. The earliest blood bank in the United States began operation at the Cook County Hospital in Chicago.

16 1638. The Countess of Chinchon, whose husband was Spanish governor of Peru, began taking an Indian remedy for malaria. It was the bark of a tree now called cinchona in her honor, as drug we know better as quinine.

1867. In the Lancet for March 16, 1867, Lister published the first of a series of articles entitled, "On a New Method of Treating Compound Fracture, Abscess, etc., with Observations on the Condition of Suppuration."

1785. Erasmus Darwin read a paper which was dated January 14, 1785, and which was published in the medical transactions, containing a reference to foxglove. These were probably the first things in print in medical literature on the use of digitalis, as both were published prior to Withering's book. But as Dr. Fulton points out, there is no question that Darwin received his first acquaintance with digitalis from Withering. The evidence is indisputable as Withering himself cites the case (No. IV; Miss Hill) and says Darwin was his consultant).

1778. At a general meeting of citizens, the Small Pox Society of Chester, England, was formed, having for its purpose the promotion of inoculation and the prevention of casual smallpox in Chester. A general inoculation was proposed every two years and in the interals "rules of prevention" were to be put in operation.

17 1803. Montpellier Medical Faculty reorganized.

1927. Institute of Optics (Paris) opened.

18 1718. Lady Mary Wortley Montagu had her three-year-old son inoculated for small pox.

1829. A rude "Glottiscope" was exhibited to the Hunterian Society of London by Benjamin Babington of Guys Hospital.

1867. The Anatomical Act was passed by the State Legislature of Pennsylvania.

19 1832. The first health act in New Brunswick was passed, entitled "An Act to prevent the importation and spreading of Infectious and Distempers in the City of St. John."

1750. The frame was erected for a public hospital for the settlers of Halifax and it was maintained by the British Government for several years.

(Continued on next page)

20 1910. The clinic of Industrial Diseases (Milan) was opened.

21 1851. Dr. Lafayette Houghton Bunnell discovered the Yosemite Valley, California.
1853. The Demilt Dispensary was opened. The Demilt Dispensary was always open to women students and women attending physicians.

22 1800. The old Corporation of Surgeons was chartered by King George III.
1800. The Royal College of Surgeons in London was granted a Royal Charter.

23 1808. The Legislature passed the first act establishing the standards and procedure for those who wished to practice medicine in New Orleans. It was called "An Act Concerning Physicians, Surgeons and Apothecaries," and it was signed by Governor W. C. C. Claiborne.

1857. Claude Bernard announced his discovery of a starch-like substance which he proposed to call "glycogen."

1947. Birthday greetings to Dr. Zoe Allison Johnston, 27th President of the American Medical Women's Association. (1943-44).

24 1359. Close Roll of 33 Edward III, 1359, March 24, "Master Adam Rous the King's surgeon is sent to the Abbot and Convent of Croyland to receive such maintenance in that house for life as Henry atte Naysee, deceased, had therein at the King's request, by privy seal."

1794. "An Act to Regulate the Practice of Physic and Surgery within this Commonwealth" had its first reading in the House of Representatives of the Commonwealth of Pennsylvania.

1882. Robert Koch presented his data concerning Tuberculosis before the Berlin Physiological Society.

25 1805. The "London Dispensary for Curing Diseases of the Eye and Ear" was opened in Charterhouse Square.

1922. Sir F. W. Mott has shown that in dementia praecox there is a primary atrophy of the reproductive organs in both sexes, and that it is an inherent congenital defect, and not due to chronic disease in other parts of the body, for it is absent in General Paralysis.

1688. An item dated March ye 26th, 1688, in the note book of a doctor at Crambrook, Kent: Mr. Asten for the Itch—A pot of oyntment lbs 0:2:6—for his arme aftar leting blud: A Cattaplm 0:2:0—oyntment for ye itch 0:2:0—Pill Ext Rudu dr j 0:2:0—more oyntment 0:1:6—more oyntment 0:0:9—Total 0:10:9.

26 1947. Birthday greetings to Dr. Bertha Van Hoosen, first President of the American Medical Women's Association. (1915-1918).

27 1727. William Cheselden performed what it known as his "lateral stone operation" for the first time.
1802. Corvisart was appointed personal physician to Napoleon Bonaparte the same date that the Treaty of Amiens which gave France its first real peace in ten years was signed.

1817. Robert Tomes, an American physician and author, was born in New York City. Besides many contributions to journals and periodicals he published "The Bourbon Prince," "Richard the Lionhearted," etc. He died in Brooklyn, August 28, 1882.

28 1576. The authorities of Milan passed a law which threatened with the death penalty any one who came from an infected area to Milan without a health pass.

1892. Dr. Letitia A. Westgate graduated from Northwestern University Woman's Medical College. Here she won the first prize in a competitive examination in microscopy and in chest and throat diseases.

1841. On Sunday, March 28, 1841, a school teacher of Boston, Miss Dorothea Lynde Dix, was asked to give Sunday School instructions to the inmates of East Cambridge House of Correction. Here for the first time she was brought in contact with the frightful conditions in the jails of that time. She found 20 women crowded together into one very dirty room. No provision was made for heat, for among them were several who were insane and because of their violence a stove was dangerous. Miss Dix was shocked. She decided to do what she could to remedy the condition. Thirty-two new State Institutions were started as a result of her work.

29 1859. William Alexander Alcott, physician and author, was born in Wolcott, Connecticut, August 6, 1798, and died March 29, 1859. Among his writings is an autobiography, "Forty Years in the Wilderness of Pills and Powders." He edited Juvenile Rambles and the first weekly periodical published in America for children. He published over 100 books and pamphlets many dealing with education, morals and physical training and he was identified with noted reforms.

1844. Dr. Washington Lemuel Atlee performed his first ovaricotomie on March 29, 1844, and his 387th on May 31, 1878. He was one of the founders of the American Gynecological Society and one of the organizers of the American Medical Association.

30 1842. Dr. C. W. Long administered ether to James Venable and removed a small tumor from the patient's neck.

31 1596. Rene Descartes of France was born March 31, 1596, and died February 11, 1650. As founder of a new philosophy, Descartes is of great importance in the development of medicine. He considered the human body to be a material machine, directed by a soul located in the brain. He wrote the first psychological and the first physiological textbooks.

1811. Robert Wilhelm von Bunsen of Germany was born March 31, 1811, and died August 16, 1899. He made many discoveries and was particularly clever in devising appliances especially the burner called after him. With G. R. Kirchoff in 1859 he made the spectroscope, with which new instrument they discovered two new elements, cesium and rubidium.

International News and Interviews

DR. FRANCES LEE FROM CHINA

Dr. Frances Lee

Dr. Frances Lee is the new Resident in the Strang Department for Cancer and Allied Diseases at the New York Infirmary. Dr. Lee arrived in America in February. She was born in the Province of Fukien, China, and comes from a family of four sisters, three of whom are teachers, two of science and one of literature in Shanghai.

Dr. Lee took her university work at Hwa Nan College, Foochow, Province of Fukien, China and was admitted to medical school in 1929. She graduated from the Woman's Christian Medical College in Shanghai in 1933 and since her graduation has spent her time at the Margaret Williamson Hospital, Shanghai, specializing in gynecology. Dr. Lee is particularly interested in hormonal therapy and its relation to therapeutic value in the treatment of carcinoma, and also in the technique employed in the staining and reading of vaginal smears by the Papanicoloau method as an aid in diagnosis of gynecological carcinoma.

—*Interview by* Isabel Knowlton, M.D.

BELGIAN DOCTORS EN ROUTE TO MONGOLIA

Mother Marie Franciscus and Mother Marie Xaverine, members of the Missionary Canonesses, Order of St. Augustine, of Belgium, have arrived in the United States en route to China. They are planning to stop first in Peking to found a general hospital and nursing school for Chinese girls. While here in the United States they are observing American hospital technique. Both doctors, graduated from the University of Louvain, Belgium: Mother Marie Franciscus is a general surgeon, Mother Marie Xaverine, a gynecologist and obstetrician. At a tea given in their honor at the New York Infirmary by Mrs. Frank A. Vanderlip, President of the Board of Trustees, they brought a message of thanks from their colleague, Sister Peter. Sister Peter, now on the staff of the University of Louvain, is an ardent friend of the Infirmary. She was here last year, being fitted for an artificial limb: as a result of the Jap bombing in the Philippines, she suffered the loss of a leg and part of her right hand. The doctors' ultimate destination is St. Joseph's Hospital in Ninghia, Mongolia. To replenish the equipment in this hospital, devastated by the Japanese, the doctors received a large assortment of medical supplies, equipment, instruments, drugs, etc., from the Medical and Surgical Relief Committee of America. "I am very pleased to let you know that today the Medical and Surgical Relief Committee has sent us a list of supplies for our Mongolian Missions. They are all instruments and drugs which will be of very great use to us. You can imagine how much we appreciate this gift. I so often think of that agreeable afternoon we had at the New York Infirmary and for the so much appreciated help we obtained thanks to your kind introduction. Mother Mary Franciscus, M.D." A Christmas card from Honolulu informs us that Mother

Belgian Doctors Visit the New York Infirmary

Mary Xaverine is now on her way to China. Mother Mary Franciscus will soon leave to join her at the Mission Hospital in Peking.

—*Interview by* ADA CHREE REID, M.D.

The Medical and Surgical Relief Committee, which from its headquarters at 420 Lexington Ave., New York City, helps hospitals, missions, and welfare agencies all over the world, has donated to date $969,312.21 worth of medical, surgical and dental supplies and equipment to needy institutions. Gifts of medicines, used instruments or equipment (which the committee reconditions) will be greatly appreciated. Anyone wishing to send supplies is asked to get in touch with the committee.—A.C.R.

MEDICAL WOMEN'S INTERNATIONAL ASSOCIATION

AMSTERDAM, JUNE, 24-30, 1947

Dear Colleagues,

We have the pleasure to inform you, that the Vth Congress of the Medical Women's International Association will meet in Amsterdam, at the Indian Institute, Mauritskade 5, from June 24 to June 30, 1947.

We are very happy, after these years of forced seclusion, to welcome you in our country and in our city and hope to offer you a programme, which, from a scientific point of view as well as from one of leisure, will be after your taste.

Besides the sessions, which will take place at the Indian Institute in Amsterdam, we intend to organise a certain number of festivities, excursions and trips to important places. A preliminary programme is attached.

Sincerely yours,
DR. HENRIETTE A. LOHR

Amsterdam, February 1947.

PRELIMINARY PROGRAM

(All general meetings will take place in the Indian Institute, Mauritskade 5, Amsterdam).

Monday, June 23

Opening of the Reception Bureau. (Following days at 9:00 A.M.)

10:00 A.M.-5:00 P.M.—Distribution of Congress-papers, invitations, and tickets for excursions.

Tuesday, June 24

9:30 A.M.—Council meeting at the Headquarters of the "Ned. Maatschappij tot Bevordering der Geneeskunst," Keizersgracht 327, A'dam-C. Official opening session in the Aula of the Indian Institute. After the session: Tea, offered by the Netherland Association of Medical Women.

Wednesday, June 25

9:30 A.M.—General Meeting.

12:30-1:30 P.M.—Lunch at the Indian Institute.

1:30 P.M.—Scientific Meeting: "What are the Responsibilities of Medical Women in the Reconstruction of the World, as Physicians, Social Workers, Internationalists?"

Evening—Reception or Dinner.

Thursday, June 26

9:30 A.M.—Continuation of the Scientific Meeting.

12:30-1:30 P.M.—Lunch at the Indian Institute.

1:30 P.M.—Continuation of the Scientific Meeting.

Evening—Reception or Dinner.

Friday, June 27

Excursion to Delft or Eindhoven.

Saturday, June 28

9:30 A.M.—General Meeting and Closing Session.

1:30 P.M.—Council Meeting at the Headquarters, etc.

Sunday, June 29

9:30 A.M.—Council Meeting at the Headquarters of the Ned., etc.

1:30 P.M.—Council Meeting at the Headquarters of the Ned., etc.

N.B.—Visits to various institutions during the Congress are being planned, as well as trips in Amsterdam and to the surroundings. You will find all details in the definite program, which will be sent to you after your registration has been received.

Dr. Catharine Macfarlane has received the following letter from Dr. Lohr, regarding transportation.

Dear Dr. Macfarlane:

I am informed by the Lissone-Bureau that the Queen Elizabeth, when sailing on the 11th of June, will be at Southampton in the afternoon of the 16th. If the boat is not too late, you will reach London in time to get the 8 o'clock boat train to Harwich that night. At 10 o'clock the boat will be leaving for Holland, arriving at Hoek Van Holland at 7 in the morning. There is a boat train from Hoek Van Holland to Amsterdam at 8 o'clock and arriving there at 10 o'clock at the Central Station. This boat train is passing through Rotterdam.

If you want to visit Rotterdam, it is much easier to go by train, than to ask for the boat to take you there, as the sluizing would take an hour at least, whereas the train will bring you there in a quarter of an hour.

The Harwich-boat has a daily service, Sundays excepted. As the congress won't open until Tuesday the 24th, perhaps you will prefer to stay a few days in London. The Congress-bureau at the Indian Institute at Amsterdam will be open on Monday the 23rd from 9-5 and on Tuesday. Congress will be open in the afternoon, I expect.

In any case I beg you to let us know the exact date of your arrival at Amsterdam, so we can book your hotels for you, as you may not be able to get a room, if you come unexpected.

We shall be very happy to welcome many American Colleagues in Holland.

With kind regards,

Yours sincerely,
Henriette A. Lohr
Arts Voor Inwendige Ziekten
Amsterdam Z.,
Van Eaghenstraat 105.

January 27, 1947

* * *

A letter from Dr. Montreuil-Straus states that "The French Association asks me to tell you that our members will be happy to arrange a visit in Paris for about ten of your members if they would tell me beforehand at what date they expect to come." *If any of our members wish to accept this invitation, please communicate directly with Dr. Montreuil-Straus, 75, rue de l'Assomption, Paris (16), France.*—HELEN F. SCHRACK, *National Corresponding Secretary, M.W.I.A.*

Dr. Agnete Braestrup writes that "all members of our Association will be welcome in Denmark preceding the meeting in Amsterdam (see notice in February JOURNAL). If the number is too great to be taken care of in private homes some can be accommodated in hotels."

"Transportation can be made from Copenhagen to Amsterdam either by air or by train. The train leaves Copenhagen at 23 o'clock—with sleeper—and arrives at Amsterdam at 20 o'clock the next evening. So it passes through Germany, —Hamburg—by day. The military permit to pass British occupied zone in Germany you can get in Copenhagen. The fare is 70 danish Kroner III class and 110 I class plus sleeper."

If you wish to accept this invitation will you please write immediately to Dr. Braestrup at Niels Andersensvej 55, Hellerup, Denmark.

* * *

The Medical Women's International Association officers are:—*President:* MISS LOUISA MARTINDALE, C.B.E., M.D., 25, Manchester Square, London, W.; *Vice-Presidents:* DR. MARIE BAUER-JOKL (Austria), DR. SOPHIA GARLICKA (Poland), DR. PIROSK GEMESSY (Hungary), DR. CATHARINE MACFARLANE (United States) and DR. L. THULLIER-LANDRY (France); *Honorary Treasurer:* DR. DORIS ODLUM, 42, Harley Street, London; *Honorary Secretary:* DR. G. MONTREUIL-STRAUS, 75, rue de l'Assomption, Paris (16).

* * *

NOTICE

At the meeting of the Medical Women's International Association held in London last September, 1946, it was decided to publish in book form the speeches and reports given at that time. These papers are of great importance historically inasmuch as they tell the story of the work of the women physicians during the war. Dr. Andrea Andreen of Stockholm, writes that they must order at least 500 before publication. The medical women of England will take 166 copies; we should be able to take 200 copies, at least. The price of the book will be One (1) Dollar. If you would like a copy, will you please send your name and address—no money yet— to Dr. Ada Chree Reid, One Madison Ave., New York 10, N. Y.

INTERNATIONAL NEWS

HOLLAND

Dr. Elise Sanders, past president of the Netherlands Medical Women's Association, sends the greetings and best wishes of Dutch colleagues for 1947, expressing the hope that the American delegates will enjoy the trip to the Amsterdam Congress next summer.

ENGLAND

A note from Dr. Louisa Martindale, "I was so interested in Dr. Lovejoy's report of the Medical Women's International Association in your JOURNAL. It was excellent and such a good thing to have an authentic account of the origin of the M.W.I.A."

ROUMANIA

Dr. Florica Bagdasar has been appointed Health Minister in the Roumanian Cabinet. She is the first woman ever to hold a cabinet post in that country. Dr. Bagdasar succeeds her husband, Professor Dimitris Bagdasar, who was Minister of Health until his death.

POLAND

Dr. Marie Skokowska-Rudolf of Poland was among those attending the meeting of the Executive Committee of the International Union against Tuberculosis, held November 7, 1946, in Paris. This was the first session of the committee since January, 1939. Co-operation with the World Health Organization and steps to be taken to complete the reorganization of the I.U.A.T. were the principal topics of discussion.

FRANCE

Dr. Marie Helmer-Dupic, physician in charge of medical work supported by the American Women's Hospitals through the Comité Féminin de Service Medical in France, for the care of the sick among released deportees and their families as well as orphan children, has recently written to the Chairman of the A.W.H. as follows: "I must express to you and your Committee my most profound gratitude for all that you have done for the numerous welfares in which I have placed my activities. Without your aid, it would have been impossible to act in a useful way and because of the help you have given us, many of our *deported* persons, who came back home ill and wearied by their long captivity, have now recovered health and hope in life. Many of our little French children, too, have a home and joy in their hearts." Dr. Helmer-Dupic was an active member of the Resistance Movement during the War. As a physician it was possible to have a car, a telephone, and to receive visitors without attracting special attention of the Gestapo. She was, therefore, able to assist members of the Resistance Movement and others marked for arrest or deportation. In this service a "Medical Code" was useful and on one occasion, when she was warned over the telephone that her "scarlet fever case" was in a bad way, she immediately took the American aviator who was hiding in her house to a safer place and was back in time to receive the Gestapo who searched her premises.

PHILIPPINES

Dr. Natavidad Villolobos of the Philippine Islands is now in this country, at the Anna State Hospital, Ohio, studying methods employed in the care of mental patients.

ARGENTINA

Dra. Ines L. C. deAllende writes from Cordoba: "I deeply regret not having been able to send an article for the International Number of the JOURNAL. I should have been very happy to collaborate in that. . . . However, I plan to send you an article on Menopause. I cannot at this time promise any more collaboration but I shall make an effort to secure articles as I am able. The number of women doctors, and in particular, those interested in research and publication, is extremely limited here. . . .

DENMARK

Dr. Agnete Braestrup, President of the Danish Medical Women's Association, has extended an invitation to American medical women attending the International Meeting in Amsterdam. Ten American women are to be guests in the homes of the Danish Medical Women from June 15 to 22. "We shall be very glad to entertain you and show you what might be of interest to you in the medical field in this country." Members of the A.M.W.A. who would like to accept this invitation from the Medical Women of Denmark, are asked to communicate directly with Dr. Braestrup.

Dr. Herdis Rye von Magnus, Assistant Physician in the State Serum Institute, has been awarded a Fellowship by the American Association of University Women. Dr. von Magnus received her M.D. degree from the University of Copenhagen in 1939. She will come to the United States to continue research on the virus of poliomyelitis. The Danish Serum Institute is anxious to be brought up to date with American progress in this field.

RUSSIA

Dr. Nadezhda Kudryavtseva and a nurse make a routine examination of a Soviet village child. Good care for all children is a basic Soviet principle.

Dr. Maria Ilyina announces new plans for Child Welfare. Care for women and children, instituted by the Soviet Government on an unprecedented scale in the years since the Great October Revolution, is to be substantially expanded under the Fourth Five-Year Plan. Widespread damage caused by the war is one of the factors accounting for the tremendous scope of the program. The Ministry of Health of the U.S.S.R. has opened a wide network of women's and children's consultation centers all over the country as well as nurseries and children's homes for orphans and semi-orphans. Children's homes are staffed with pediatricians, competent teachers, and nurses to look after the children's health and their physical and emotional development. (From the U.S.S.R. Information Bulletin, January 8, 1947.)

GREECE

On the letterhead of the Alumnae Association of the American Women's Hospitals School of Nursing in Greece the following communication has just been received by the Chairman of the A.W.H. Committee: "I want to give you a small idea about the work I have been doing these last few months. We have been registering the Armenians who are really interested in Soviet Armenia and want really to go and get established there. In a very short period we registered more than 27,000 in all Greece. Starting from August 13 we shipped three boats, taking over more than 5,400 Armenians with their bag and baggage, helping them with food, clothing, and transportation expenses for those coming from distances, forming committees for the boats to give the people medical care, milk for children, bread and food for the needy, until they land at Batum after which Soviet Armenia takes the responsibility; vaccinating them, giving thorough medical examination, transferring them to the parts of land where they'll get established. Fortunately, we didn't have any break of epidemic and deliveries in the boat. Last boat left September 27 after which we stopped for the winter, but we hope to start again in early spring. Now we are checking the lists for births and deaths to prepare the list for spring. Next year we are planning to send 10,000 maybe in four or five boats." Signed: H. Partikian Sahagian.

Mrs. Sahagian is one of the graduates of the A. W. H. School of Nursing and member of their Alumnae Association. All of these nurses are being assisted in their work in Greece by the American Women's Hospitals. As children, they attended American Mission Schools and to one who reads Mrs. Sahagian's letters and reports written in English, it seems incredible they could have been prepared by an Armenian woman who had never been farther away from her place of birth than Greece where, as a young girl, she was received as a refugee 20 years ago. The Armenian people, to whom she refers in this letter, were exiles from Turkey after the First World War, followed by the Greco-Turkish War. They are now returning in large numbers to their native country. The American Women's Hospitals has not only assisted Mrs. Sahagian in her capacity

as nurse on these trips to Soviet Armenia, but has provided equipment and secured supplies to be used in this connection.

BELGIUM

Dr. Renee Portray is coming to the United States, on a Fellowship awarded by the American Association of University Women, for special training in Children's Neurology and pathology. She is a graduate of the University of Brussels, 1945, Dr. Portray will do research and clinical work with a view to "improving the protection of mental development of childhood and adolescence" in her own country.

LONDON

Dr. Alice North, of Castine, Maine, U.S.A., has arrived in London to visit her "boys"—British seamen whom she nursed back to health during the war. In 1942, Dr. North, a physician practicing in New York, turned her country home in Maine into a convalescent hospital for British seamen. There were always five seamen there from December, 1942, until April, 1946. Dr. North studied the weights of her Naval patients, and after three years they worked out for her from the logs that she had added a ton of weight to the British Navy.

This article is designed particularly for the younger group: Medical students, Internes, and Residents

Opportunities For Medical Women

H. E. THELANDER, M.D.

OPPORTUNITIES ARE as dependent upon the individual as upon the environment. When a person belongs to a minority group, as a woman does in medicine, the grooming for work in the field becomes of utmost importance. This grooming involves not only training in the profession or specialty, but such secondary matters as appearances, deportment, and even morale. In a field traditionally masculine, a woman must know more than her male confreres to get equal credit or confidence. She not only needs to know her subject, but she should analyze, tabulate, and classify her knowledge so that her information is always lucid. She should never give the impression of having her subject matter muddled or confused. Clarity and precision aid in establishing confidence. Statements should always be based on facts. If the answer is not known, a frank statement to that effect is far better than evasion. Intellectual honesty, negative as well as positive, inspires trust.

When called upon to perform technical procedures, such as spinal punctures, intrathecal therapy, and other manual procedures, the woman student or resident is inclined to turn to a male member of the group for help. It is, therefore, necessary for a woman to discipline herself to use every opportunity to develop dexterity in these techniques. This discipline should be practiced so diligently that it becomes habitual for her to rely upon herself and to have complete confidence in herself in the manual part of medical work.

After graduation, it particularly behooves the woman in medicine to keep medical information up to date. Medicine is such a rapidly expanding field that only those who are constantly vigilant will be able to keep abreast of the newer knowledge. To keep informed requires not only reading, but also attendance at medical meetings and constant hob-nobbing with doctors. Since there are so few women in medicine it becomes more difficult for them to have this more or less daily shop talk which is so characteristic among the men. Nor is it desirable that a woman limit her contacts to other women in the field. She needs to establish a good working relationship with her male confreres.

Women in medicine not only must establish themselves in a field traditionally masculine, which means they must gain the confidence of the public still in the habit of thinking of doctors as "men," but very often they must also overcome within themselves the early conditioning of most girls to

be dependent upon man and to yield to his leadership. In almost every home boys are reared in an atmosphere that encourages them to independence and manliness by words like these: "You are the man of the house," or when brother and sister are stepping out together: "Take care of your sister." Little girls, on the other hand, are admonished: "Little girls don't do that" or "Let your brother do that for you."

Even though a woman is brilliant and is so recognized there is no reason for her not to be well dressed and present a pleasing appearance. Unfortunately, or possibly fortunately, the dress of women allows for such variation that it is easier for woman to fail in appropriate dress than it is for man. In the past particularly, women in the professions were often criticized for imitating the men in dress and habits or for dressing quaintly, the latter being credited chiefly to the fact that women were so absorbed in the work that they neglected to dress appropriately. The present tendency is to go to the other extreme.

Women in hospital work, either as clerks or as interns and residents, should be careful of their dress. It is no more expensive for them to be dressed appropriately than it is for the men to be so clothed. Dress should be appropriate, inconspicous and modish. Fashion dictates are now so well established that there is no reason for anyone not to be appropriately costumed for any occasion.

The physician is the servant of the public and in this position is constantly under the scrutiny of that public. If success is an aim, then the criticism of the public must be taken into consideration. Dress has already been mentioned. It may be carried a bit farther.

The use of pressing medical duties as an excuse for repeatedly appearing late at functions has been worn threadbare. The physician should indulge in it seldom.

The private life of the physician should be above reproach. Many a man has jeopardized his practice by a divorce or family scandal that reaches the press. A woman in practice needs to watch her conduct even more carefully.

A great factor in inspiring confidence and trust is morale. The woman in medical practice, whether married or single, needs to have a satisfactory social, mental, and economic existence which gratifies all her faculties and makes her a desirable asset to any group and to the community. These assets do not come to one without effort and the effort which might be put into working out such an existence is often wasted on emotions tied up with frustrations in her chosen profession. Many a woman has become bitter because of prejudice against her in the field of medicine. Frustration, bitterness, and envy must never be permitted to get entrenched; no woman can succeed if she yields to these moods. It is impossible to keep up a good morale if she does so yield. Very soon prejudice is confused with other factors and opportunities dwindle because the person seeking them is undesirable. A woman in medicine must be very sure that failure is not due to herself, her training, knowledge, and personality, rather than due to her sex. There has been too great a tendency in the past for girls who are seeking careers in medicine to ignore all or many of their own qualifications, and then when failure ensues to put the blame on prejudice against their sex. It is essential that women assume responsibility for their training, appearance, deportment, and morale, before they blame failure upon prejudice.

It can probably be safely stated that the world is tending toward an era of more nearly equal opportunities for all regardless of race, religion, or sex; that era for women in medicine can be hastened best by individual diligence on the part of the woman medical student in perfecting herself and developing her own talents; less energy being devoted to either aping the male or nursing her injuries.

ANNOUNCEMENT

of proposed and vacant positions in Health Service Division and Division of Research in Child Development

U. S. Children's Bureau
Federal Security Agency
Washington, D. C.

This announcement covers the position of Regional Medical Director (two vacancies) and also several clinical positions in the Children's Bureau which are listed below:

Director of Medical and Hospital Unit (central office of the Division of Health Services)

This is a new position in the Division of Health Services. The proposed salary is $8,100. This position calls for a pediatrician with at least, and preferably more than, 2 or 3 years' training in pediatrics and at least 4 years of highly specialized experience in clinical pediatrics, including preferably practice, teaching and some administrative experience as an administrator in a public health or hospital program. Candidates

for this position should have creative ability in the development of health, medical and hospital services for mothers and children that are of highest quality and that will fit into the varying conditions in local communities, and should have an interest in the newer methods of organizing medical care, such as group practice and group clinics. The director of this unit will supervise other physicians who are to serve as specialized consultants to State agencies in the fields of rheumatic fever, cerebral palsy, poliomyelitis, orthopedics care of prematurely born infants, obstetrics, related medical services, and specialists in physical therapy and hospital administration.

Pediatrician—Specialist in Rheumatic Fever (Division of Health Services)

This position has been previously established but is now vacant. The beginning salary is $7,100. This position calls for a pediatrician with at least 2 years' training in pediatrics and at least 3-4 years of specialized experience in clinical pediatrics, at least 2 years of which must have been devoted principally to the care and management of children with rheumatic fever and heart disease. This specialist would serve in an advisory and consulting capacity to members of the staff of the Division of Health Services and to the State crippled children's agencies giving special attention to pediatric services in the general crippled children's program and to the development of services for children with rheumatic fever.

Pediatrician—Specialist in Care of Premature Infants (Division of Health Services)

This is a new position with a proposed beginning salary of $7,100. A pediatrician filling the position must have had 2 years' training in pediatrics and at least 3-4 years' clinical experience in pediatrics, 2 years of which preferably should have been devoted principally to the care and management of premature infants. This specialist would function in an advisory and consulting capacity to the staff of the Division of Health Services and to the State health departments in the development of child health services with special attention to the care of prematurely born infants.

Pediatric Specialist—Health Services for School Age Children (Division of Health Services)

This is a new position with a proposed beginning salary of $7,100. A pediatrician filling this position must have had 2 years' training in pediatrics and at least 3 to 4 years' clinical or administrative experience, at least 2 years of which preferably should have been devoted to the study, development and administration of organized health services for children of school age. He would function in an advisory and consulting capacity to the staff of the Division of Health Services and to the State health departments in the development of health service programs for children of school age.

Regional Medical Director (Division of Health Services)

Regional Medical Directors are assigned to a region consisting of 6 or 7 states. They give administrative direction to the work of the regional staff of the Health Services Division and carry regional responsibility for the Health Services Division in its administration of grants to States for maternal and child health and crippled children. They are also responsible for giving medical consultation to the State agencies in the administration and content of their maternal and child health and crippled children's programs. Desirable training and experience include graduate training in pediatrics or obstetrics and several years' administrative experience in administration of maternal and child health and/or crippled children's programs. Headquarters are established in each region. Positions are open in Denver and Chicago at present.

Candidates for these positions are expected to have had not less than 2 years' postgraduate training in pediatrics or obstetrics or both, 3 to 4 years' specialized experience in administration of maternal and child health and/or crippled children's programs and preferably clinical experience beyond the two years of training. One year of academic training in a school of public health may be substituted for a year of administrative experience. The beginning salary is $7,100.

Research Obstetrician (Division of Research in Child Development)

This position has been previously established but is now vacant. The beginning salary is $7,100. This position calls for an obstetrician with at least, and preferably more than, 2 or 3 years' training in obstetrics and at least 3 to 4 years of specialized experience in clinical obstetrics, including preferably research, practice, and teaching experience. Candidates for the position should have creative ability to develop and carry out a program of research in maternity care, including problems which affect the survival or health of the child. This specialist would function as expert consultant to the Children's Bureau in the field of obstetric practice.

Research Specialist in Health Services for Children of School Age (Division of Research in Child Development)

This is a new position with a proposed beginning salary of $7,100. It calls for a pediatrician with at least 2, preferably 3, years training in pediatrics and at least 3 to 4 years of specialized experience in pediatrics, including preferably research and clinical practice related to children of school age. Candidates for this position should have creative ability to originate and carry out research on the methodology of school health services and on the present status of health services for children of school age. This specialist will serve as expert consultant to the Children's Bureau on matters pertaining to standards of contents and practices in health services for children of school age.

ORGANIZATION

Official Reports and Announcements of the Association

PRESIDENT'S PAGE

Henceforth each issue of the JOURNAL will carry this page. Its purpose is to provide the President of the American Medical Women's Association with a means of keeping members and those otherwise interested informed of plans, problems and activities of medical women.

Since I am privileged to institute this service from the President's office, it seems appropriate to me to do so by first stating the object of our Association. It is the object of this organization to bring medical women into association with each other for their mutual advantage; to encourage social and cooperative relations within and without the profession; and to forward constructive movements such as conducting relief work, engaging in public health work, and such other and incidental purposes relating thereto, as may be properly endorsed by the medical profession.

Consistent with our objective is the subject to which this month's JOURNAL is devoted—the New York Infirmary. I have long been interested in this institution and in support of its request for our cooperation, some thoughtful questions occur to me.

What are women in medicine doing to deserve greater opportunities? How are we distinguishing ourselves to attract the younger ones to take up where we leave off? Is it realistic to raise the criterion of public service over professional policies? If you will think about such questions, then you will see that the New York Infirmary has an enormously important future ahead of it as an institution in which *all* of us have a great stake. Every pioneer accomplishment of the doctors of the Infirmary does not benefit them or their patients alone—it benefits all women in medicine especially and the medical profession generally. It would be a wonderful thing if women throughout the world knew that there was a haven they could turn to for inspiration, for specific study or training, or a place where research could be undertaken.

Equal opportunity for men and women to work side by side is, of course, our desire. At the moment this idea of equal opportunity is still a theory. It may take many years for the millenium to be reached. In the meantime we must live with reality. We must face the fact that internship and residency opportunities for younger women are at a new low this year and will likely remain that way for several years to come. We must face the fact that ability alone is not the common denominator that opens staff opportunities for women in most hospitals. It should be our common hope and dream that a very rich tradition which women in medicine have inherited may be continued with benefit to our science and our art.

It should be our common practical need to face facts and contribute what we can to the current problem of training and practicing opportunities.

Support of the New York Infirmary serves both, and all of us, unofficially, can certainly do our full part.

Helen Johnston

ASSOCIATION ANNOUNCEMENTS

The ANNUAL MEETING of the A.M.W.A. will be held on June 7 and 8 (preceding the A.M.A.) at the Hotel Claridge, Atlantic City. The procedure in making reservations is as follows: If you are planning to arrive before June 8 for the A.M.W.A. meetings, write direct to the Hotel Claridge. If you are going to arrive June 8 or later, you must fill out the application blank for hotel reservations found in the Journal of A.M.A. and mail as directed. In either case, write early for your reservations. State definitely the date of arrival and departure. Address Ada Taylor, Convention Manager, Hotel Claridge. There will be no reservations accepted for single rooms. Indicate the name of your roommate when making your application. This is important.

—CARYE BELLE HENLE, M.D.
Chairman of Arrangements.

* * *

In accordance with the Constitution, all motions relating to New Business must be submitted in writing to the Resolutions Committee or must be printed in the JOURNAL previous to the annual meeting. Therefore, all such motions must be in the hands of the Secretary, Dr. Schrack, no later than March 25 to be published in the May issue. Please note also, that all Chairmen of Committees, Regional Directors and Branch Officers must send their reports for the year—in triplicate—to the Secretary, at least three weeks previous to the annual meeting.

The meeting of the Medical Women's International Association in Amsterdam, Holland, June 24 to June 30, 1947. The A.M.W.A. is entitled to five councillors. Those elected at San Francisco are Drs. Brakely, Lovejoy, Mason-Hohl, Schrack, and Helen Johnston. Members who are contemplating attending the meeting are asked to communicate with Dr. Schrack or Dr. Johnston at once, so that delegates may be selected.

LIFE MEMBERS

October 1, 1945—January 31, 1947

*184 CLARA GRACE GOTTSCHALK, Illinois.
*185 DOROTHY HEWITT, California.
*186 SUSANNE SANDERSON, Michigan.
*187 HALLIE HARTGRAVES, Wisconsin.
*188 ESTHER I. MCEACHEN, Nebraska.
*189 MARTHA M. BROWN, Arkansas.
*190 V. CECILE CHAVANNES, California.
*191 NATALIE KECHIJIAN, Rhode Island.
*192 RUTH BLOUNT BENNETT, Illinois.
*193 M. ELIZABETH HOWE, New York.
*194 JESSIE L. BRODIE, Oregon.
*195 LOIS PLUMMER, New York.
*196 ELIZABETH PARKER, Washington, D. C.
*197 SARAH MARCUS, Ohio.
*198 M. TOWNSEND GLASSEN, Kansas.
*199 EDITH M. GORDON, Washington.
*200 FLORENCE L. MARCUS, Pennsylvania.
*201 PAULINE BEREGOFF-GILLOW, Montreal, Canada.
*202 Jessie Roberts-Broman (Memorial membership given by Dr. Beulah Cushman).
*203 ETTA P. MCCORMICK, Louisiana.
*204 CHARNA G. PERRY, California.
*205 HELEN WEYRAUCH, California.
*206 EVA F. DODGE, Arkansas.
*207 MARGARET A. VAN ATTA, California.
*208 MARGARET NICHOLSON, Washington, D. C.
*209 ANNA DENGAL, Pennsylvania.
*210 PEARL VIVIAN KONTTAS, California.
*211 GRACE M. SAWYER, Iowa.
*212 HULDA M. THELANDER, California.
*213 GEORGIANA LUTZ, Indiana.
*214 KATHARINE H. BAIRD, Wisconsin.
*215 SARAH GORDON, New Jersey.
*216 MABEL GARDNER, Ohio.
*217 LILLIAN MALONE, Washington, D. C.

NEW ACTIVE MEMBERS

CALIFORNIA

HASSAR, LILLIAN P., 452 S. San Vicente Blvd., Los Angeles 36. M.D.—Royal Hungarian University Medical School, 1934. *Specialty:* Anesthesiology.

WUERTHELE, LILLIAN J. H., 4118 Palisades Road, San Diego 4. M.D.—University of Pittsburgh, 1938. *Specialty:* None.

WASHINGTON, D. C.

HOLLY, PEARL B., 900 17th Street, N.W., Suite 409, Washington, D. C. M.D.—New York University College of Medicine, 1938. *Specialty:* Hematology.

KNOP, CATHERINE Q., 1801 K Street, N.W., Washington, D. C. M.D.—University of Hamburg, 1938 (also attended University of Minnesota). *Specialty:* Pediatrics.

ILLINOIS

HEINEN, HELEN DICKERSON, 2376 E. 71st Street, Chicago. M.D.—University of Chicago, 1940. *Specialty:* Pediatrics.

PENNSYLVANIA

DONNELLY-WOOD, DOROTHY, 2035 Walnut Street, Philadelphia 3. M.D.—Woman's Medical College, 1908. *Specialty:* Public Health.

HESS, CATHARINE B., 3665 Midvale Avenue, Philadelphia 29. M.D.—Temple University, 1941. *Specialty:* Obstetrics and Gynecology.

PFEIFFER, MILDRED C. J., 358 Valley Road, Merion Station, Montgomery Co. M.D.—University of Pennsylvania, 1936. *Specialty:* Internal Medicine, Gastroentology and Proctology.

RICHARDSON, MARY L., 2600 N. Lawrence, Philadelphia 33. M.D.—University of Colorado, 1938. *Specialty:* Pediatrics.

WISCONSIN

CAMERON, EUGENIA S., 3507 Sunset Drive, Madison 5. M.D.—Johns Hopkins, 1934. *Specialty:* Pediatric Psychiatry.

NEW ASSOCIATE MEMBERS

KENTUCKY

MARY NUTT SMITH, 233 East Gray St., Louisville. M.D.—New York University College of Medicine, 1945.

NEW YORK

MADELINE E. MORCY, 12 East 97th St., New York. M.D—New York Medical College, June 1947.

LUCIE A. SCHOENBERGER, 304 East 41st St., New York. M.D.—New York Medical College, June 1947.

ELEANOR WACHTER, 6923 Nansen St., Forest Hills. M.D.—New York Medical College, June 1947.

NEWS FROM THE BRANCHES

New Orleans—Branch Eight

On Friday, December 13, 1946, the New Orleans Branch of the American Medical Women's Association was entertained by Dr. Ruth Aleman at her home, 1305 South Carrollton Avenue. About eighteen members of the local chapter attended and quite a large number of the residents and interns from the local hospitals, making in all approximately sixty-five members and guests in attendance.

After a buffet supper, Dr. Bass introduced Dr. Aleman who gave a report of the meeting of the Women Physicians of the Southern Medical Association at its recent meeting in Miami. She also gave us a short talk on "Women Physicians in Fiction." After Dr. Aleman spoke, Dr. Maude Loeber, a well known pediatrician of this city, described her early experience in the practice of medicine. Dr. Richarda Williamson, also a pediatrician, spoke of Medical Women in England. Dr. Clothilde Jauquet, who is now retired, told us of her residency at Eye, Ear, Nose and Throat Hospital, New Orleans. She was the first woman resident there and her experience is unique in that she was urged to take this residency by Dr. DeRoaldes, who was the Chief Physician. This was quite unusual as it was extremely difficult for women to obtain internships or residencies at that time.

It was a most enjoyable meeting and the group expressed its appreciation for Dr. Aleman's hospitality.

* * *

Washington, D. C.—Branch One

At our October meeting we had as our guests the medical women of Branch No. 3, Baltimore, at a banquet in the Mayflower Hotel. This was at the time of the Scientific Medical Society. On the day preceding the banquet Dr. Gladys Kain gave an informal buffet supper at her home for the medical women attending the meetings.

At our November meeting Dr. Irma Belk Hobart gave a paper on the Sanity Commission of the District of Columbia. Dr. Hobart, a member of her branch, is a psychiatrist on the Board of the Commission.

At our December meeting was also somewhat an event. For the first time since the war, a meeting was held in the charming atmosphere of the home of Dr. Caroline Pincock instead of the usual meeting room of Doctors Hospital.

Also in December, Dr. Helen Johnston visited Washington as delegate to the Inter-American Commission of Women. The only other medical

woman delegate to this commission was Dr. Alma Jane Speer. At this time Dr. Gladys Kain gave an evening reception at her home for Dr. Johnston which was very well attended, since we were all interested in meeting Dr. Johnston.

Our January meeting was a joint one, with the women dentists of this city, for the first time. At this meeting three of the dentists gave papers on "The General Practice of Dentistry"—"Orthodentia" and "Peridontia."

ORGANIZATION AND MEMBERSHIP

The Organization and Membership Committee has received a very fine report recently. This comes from the South Atlantic region. Dr. Amey Chappell is the director. There are four states in her region: Florida, Georgia, North Carolina and South Carolina. She has been working to obtain state representatives.

In Georgia, Dr. Cordelia Dowman, from Atlanta, has been appointed. We hope Dr. Dowman will bring many new individual members in the American Medical Women's Association. There is an active branch in Atlanta and Dr. Elisabeth Martin is the president of the Atlanta Branch this year.

In Florida, Dr. Ella Enlows from Fort Lauderdale has been appointed state representative. We do not have a branch in Florida but Dr. Chappell and Dr. Enlows together with Dr. Ruth W. Rumsey and Dr. Jean Perdue are trying to interest the medical women of Florida in organizing a branch. I hope that we will have the pleasure of announcing this branch at the time of the annual meeting in June.

In North Carolina, Dr. Irma Henderson-Smathers from Ashville, is our state representative. She has surveyed her state and has tried to organize a branch in Ashville. She reports very slow progress. I hope that she will not become discouraged and that she will meet with success later on. In South Carolina, Dr. Augusta E. Willis from Orangeburg is the state representative.

I do hope that all of the state representatives will work with Dr. Chappell and make a survey in order to determine if branches are desirable or to find out if the eligible medical women are members of our national organization.

Several letters from Dorothy Rogers, Chairman of the North Atlantic region, gives me the information that she is making progress. I hope that she will have a completed report in time for the next JOURNAL. I would like to announce again as in the past that I wish all Regional Chairmen to act on the Organization and Membership Committee.

—ZOE A. JOHNSTON, M.D., *Chairman*
Organization and Membership Committee

AMERICAN MEDICAL WOMEN'S ASSOCIATION, INC.

APPLICATION FOR MEMBERSHIP

☐ Active. $3.00 ☐ Associate. No dues ☐ Life. $50. ($25 in two payments)
(Active, associate, and life members receive the official publication. Active and life members receive membership in Medical Women's International Association.)

Dr. .....
(Please print name as you wish it to appear in Year Book)

Address .....

.....

Medical School ..... Year of Graduation .....

Other Degrees .....

Licensed in County ..... State .....

Member County Society ☐ Yes ☐ No ..... Fellow A. M. A. ☐ Yes ☐ No .....

Specialty ..... Specialty Board ☐ Yes ☐ No .....

Place of birth—City ..... State ..... Single; Married; Widow .....

Date of Application ..... Signature .....

Endorsed by 1 ..... M.D., Member AMWA

2 ..... M.D., Member AMWA

NOTE: Make check payable to American Medical Women's Association, Inc.
Mail this blank and check to Treasurer, MARY RIGGS NOBLE, M.D., Bowmansdale, Pennsylvania

News of Medical Women

Edited by ELIZABETH KITTREDGE, M.D.

Members are urged to send news items and announcements of interest to Dr. Kittredge, 3906 McKinley St., N.W., Washington 15, D. C.

* * *

Dr. Evelyn Rogers, district state health officer, spoke on "Rabies as a Public Health Problem" at the annual meeting of the Utica (New York) Academy of Medicine.

* * *

Dr. Caroline Jackson of Washington, D. C., officiated at the birth of triplets at the Garfield Hospital on January 10, 1947. Although triplets occur but once in 10,000 births, a Garfield Hospital spokesman reported that Dr. Jackson had delivered triplets there a year ago.

* * *

Dr. Elaine Ralli, New York University, has been appointed a member of the section on Metabolism and Endocrinology, one of nineteen special study sections organized by the Public Health Service to provide the National Advisory Health Council with expert advice on applications for research grants.

* * *

Dr. Marion Cabot Putnam of Milton, Mass., (Johns Hopkins University, 1921) has been appointed a lecturer on Psychiatry at the Harvard Medical School.

* * *

Dr. Helen Walker of Buffalo, has been elected Secretary of the Erie County Medical Society. Dr. Walker is President of the Women's Medical Society of New York State.

* * *

Dr. Eleanor Kellogg Peck, who was associated with Dr. Alice Stone Woolley, has reopened the office at "Stoneridge" for the general practice of medicine and pediatrics. Dr. Peck recently completed a post-graduate course in the diseases of children at the University of Chicago. A veteran of World War II, Dr. Peck returned to Poughkeepsie about a year ago after four years service in the European war theatre.

Dr. Eloise W. Kailen of Washington, D. C., is now a member of the American Academy of Allergy. She presented a paper as guest speaker at the November meeting of the Academy in New York City.

* * *

Among the post-graduate students at New York University School of Medicine are two young women who served as doctors in the Army Medical Corps. Dr. Katherine Jackson discharged last June with the rank of Major, is specializing in anesthesiology. She was chief of the section on anesthesiology with the 240th General Hospital. While overseas she was stationed in France, Belgium, Luxembourg and Germany. She received her B.A. and M.D. degrees from the University of Wisconsin.

The other woman veteran is Dr. Aurelia Rozov, who was discharged last March with the rank of Captain, and is studying internal medicine. She received her medical education at Komensky University in Czechoslovakia and came to the United States in 1939, where she did graduate work in internal medicine and cardiology at the Goldwater Memorial Hospital. She joined the Army Medical Corps in 1943 and served as ward surgeon at Lawson General Hospital in Atlanta, Georgia.

* * *

As a New Year's gift to Branch One, Dr. Grace Purse, President, sent all members a list of all women physicians in Washington, D. C., with address, telephone number, and specialty indicated—a very useful list to have in the telephone book when one is asked to refer a patient or recommend a doctor.

* * *

Dr. Margaret W. Barnard, Assistant Commissioner, District Health Administration, Health Department, City of New York, discussed "Health Education Procedures" at the Fourth Annual Conference on Labor Health Security, held in New York City on January 24.

* * *

At a banquet at the New London (New Hampshire) Inn, Dr. Anna M. Littlefield was the

guest of honor. She is believed to be the state's oldest living physician. Later at the Tracy Memorial Library a portrait of Dr. Littlefield was presented to the library in commemoration of her 87th birthday.

* * *

Dr. Mary B. Dale has been appointed Epidemiologist for the Los Angeles, Calif., County Health Department. Newspapers report that she is the first woman to hold such a position in the county.

* * *

Dr. Dabney Moon-Adams, Assistant Professor of Dermatology and Syphilology, College of Physicians and Surgeons, Columbia University, lectured on "Congenital Syphilis" March 1, 1947. This is one of a series of lectures being given for practicing physicians on the diagnosis and treatment of venereal disease under the direction of the New York City Department of Health. Experts in special fields of venereal disease control are participating in the seminar.

* * *

Judge Dorothy Kenyon, who is an Honorary Member of the American Medical Women's Association, has been chosen the United States Representative to the Commission on the Status of Women of the United Nations Economic and Social Council.

"The Commission on the Status of Women" is to consist of one representative from each of the fifteen members of the United Nations selected by the Council. The fifteen countries selected to nominate members are: United Kingdom, India, Australia, Denmark, France, Soviet Union, United States, Venezuela, Costa Rica, China, Turkey, Syria, Mexico, Byelo-Russie, Guatemala.

Judge Dorothy Kenyon has been chosen as the United States representative. Judge Kenyon is ideally qualified for the post. She is nationally and internationally known as a leader for the advancement of women in all fields, a leader experienced, practical, and successful. A particular qualification is her service as the United States member of the former League of Nations committee of jurists charged with studying the legal status of women throughout the world. Judge Kenyon is a member of the AAUW New York City Branch and a former member of the AAUW National Committee on Economic and Legal Status of Women.

Women's organizations forwarded to the United States Government the names of women to be considered in nominating this country's representative on the Commission, and Judge Kenyon's name was among them.

(From the Winter 1947 Bulletin of the American Association of University Women.)

* * *

Dr. Helen G. Walker, president, and Dr. Jennie D. Klein, secretary, of the Women's Medical Society of New York State, attended the mid-year meeting in New York of councilors of nine districts into which the society is divided. The meeting took place February 1 in Hotel Beekman Tower. A luncheon was given that day and on February 2, Dr. Leoni Claman entertained at tea. Plans were discussed at the meeting for the annual convention which will take place May 4-5 in Hotel Statler, Buffalo.

* * *

Dr. Elaine A. Schwinge of Georgetown, S. C., has been appointed junior field physician for the Territorial Department of Health of Alaska.

* * *

Dr. Lena English (W.M.C. 1924) is at present the only woman physician on the staff of the Michigan State College Health Service at East Lansing. She writes that her experience as a missionary doctor in the tropics and her emphasis on the psychosomatic approach to medical problems are assets in the examination and treatment of many veterans among the college students who come to her office daily.

* * *

Dr. Olive Moe (W.M.C. 1946) has just been appointed as Research Fellow in the Department of Obstetrics and Gynecology, University of California Medical School, under Dr. Herbert Traut. Dr. Moe has just completed her internship at Franklin Hospital, San Francisco, California, and a month of special training in the Department of Gynecology at Massachusetts General Hospital. Dr. Isabelle H. Perry (W.M.C. 1921) Assistant Professor of Pathology at the University of California, active in cancer control and research, is much interested in the appointment of Dr. Moe.

Reliability of contraceptive action...freedom from irritation...and fine esthetic qualities have made Ortho-Gynol the most widely prescribed contraceptive preparation.

Ortho-Gynol is instantaneously spermicidal. It has a buffered acidity to conform to the normal vaginal pH—is readily miscible with vaginal secretions and semen—and is safe to use over long periods because of uniform stability and freedom from irritation. Ortho-Gynol is available with and without the Ortho measured dose applicator. It is usually prescribed in conjunction with the Ortho Diaphragm.

Active Ingredients: Ricinoleic acid 0.7%, boric acid 3.0%, and oxyquinoline sulfate 0.025%.

Ortho Pharmaceutical Corporation

RARITAN • NEW JERSEY

Makers of Gynecic Pharmaceuticals

COPYRIGHT 1947, ORTHO PHARMACEUTICAL CORP.

The rooster's legs are straight.

The boy's are not.

The rooster got plenty of vitamin D.

Fortunately, extreme cases of rickets such as the one above illustrated are comparatively rare nowadays, due to the widespread prophylactic use of vitamin D recommended by the medical profession.

One of the surest and easiest means of routinely administering vitamin D (and vitamin A) to children is MEAD'S OLEUM PERCOMORPHUM WITH OTHER FISH-LIVER OILS AND VIOSTEROL. Supplied in 10-cc. and 50-cc. bottles. Also supplied in bottles of 50 and 250 capsules. Council Accepted. All Mead Products Are Council Accepted.

MEAD JOHNSON & COMPANY, EVANSVILLE 21, INDIANA, U. S. A.